

ROMANO-BRITISH SETTLEMENT & CEMETERIES



MUCKING EXCAVATIONS

by Margaret and Tom Jones,
1965–1978

Sam Lucy and Christopher Evans

with Rosemary Jefferies, Grahame Appleby
and Chris Going

CAU Landscape Archives Series:
Historiography and Fieldwork
(No. 3 / Mucking 5)

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***Romano-British Settlement and
Cemeteries at Mucking***

Romano-British Settlement and Cemeteries at Mucking Excavations by Margaret and Tom Jones, 1965–1978

*Sam Lucy and Christopher Evans with Rosemary Jefferies,
Grahame Appleby and Chris Going*

With contributions by

Jo Appleby, Donald Bailey, Paul Barford, Joanna Bird, David Buckley, J. Cooper, Leslie Cram, P.E. Curnow, Brenda Dickinson, Geraldine Done, Kay Hartley, Colin Haselgrove, Martin Henig, Frank Jenkins, Catherine Johns, Ruth Leary, Hilary Major, Graham Morgan, Quita Mould, Richard Reece, Krish Seetah, Nicole Taylor, Marijke van der Veen, David Williams, and the late Dorothy Charlesworth, Elizabeth Crowfoot, John Evans, Donald Harden and Margaret Jones

With graphics by

*Andrew Hall, Vicki Herring, Iain Forbes, Jane Matthews, Joanna Bacon
and Amanda Balfour*



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Front cover: Early phasing dye-line showing Bronze Age ditches and Iron Age roundhouses and enclosures (Prehistory Volume, Figure 2.1).

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Summary

Excavations at Mucking, Essex, between 1965 and 1978 revealed extensive evidence for Romano-British burial and settlement (as well as an extraordinary prehistoric sequence, and what remains the largest Anglo-Saxon settlement yet discovered in Britain). Retrieval of computer data recorded as part of the Mucking Post-Excavation project has enabled the site to be phased and interpreted as a multi-phase rural settlement, perhaps an estate centre, with five associated cemetery areas, some of which saw contemporaneous use, with different burial areas reserved for different groups within the settlement.

The settlement demonstrated clear continuity from the preceding Iron Age occupation (evidenced by pottery production, retention and re-use of enclosures and similarities in building styles, among other things). Dateable artefact types, such as coins and brooches, saw unbroken sequences through the first century AD, while the mass of pottery data strongly suggests an indigenous industry that developed new forms and fabrics, but operated very much within an existing technological and social framework. Burial in the first century AD also reflected later Iron Age practices.

The site saw a dramatic transformation in the later decades of the first century AD, primarily marked by the laying out of the Central Enclosure, with its

internal structures and divisions. While its position and orientation clearly paid some respect to existing features, together with the establishment of the accompanying Southern Enclosure system, it represents a dramatic remodelling of the settlement, complete with organised water supply in the form of two large wells within it. This area may still, however, have retained a ritual function.

This phase also marked the start of large-scale pottery production at Mucking. Phase 1 saw the production of ledge-rimmed jars in shell-tempered fabrics (part of the Thames-side pottery industry of the later first to early second century AD); in Phase 2 (early to mid second to mid third century AD) production shifted to grey and black burnished wares produced in large kilns; this pottery evidently formed part of the exports to Hadrian's Wall (perhaps along with agricultural produce from the site; brewing activity is also evident).

Internally, the site saw other evidently dramatic events: after the mid second century AD, the major wells of the Central Enclosure were abandoned (its main well being infilled with the remains of an apparently high status major household assemblage and associated burnt down building). This may coincide with the abandonment of the Central Enclosure for everything other than continued burial in its associated cemetery, and attests to a major act of enclosure-ground clearance. The pottery production on the site seems to continue, however, with four kilns (Nos. 2–5) still in use at the end of the second century, and probably into the mid third century. By this point, settlement activity appears to have shifted its focus

more to the Southern Enclosure system.

Settlement activity at Mucking after the mid third century AD is more opaque, and very few cut features could be assigned to this phase (Phase 3), although continued burial, pottery and artefactual deposition indicate that a form of settlement continued, possibly with some low-level pottery production in one of the kilns. Towards the end of the fourth century, or perhaps in the very early decades of the fifth, some of the latest Roman pottery was strongly associated with the earliest Anglo-Saxon style pottery and other material at the site, suggesting contemporary and equivalent use. It implies the existence of a terminal Roman settlement phase (Phase 4) that essentially involved an 'Anglo-Saxon' community. Given recent revisions of the chronology for the early Anglo-Saxon period, this casts an intriguing light on the transition, with radical implications for understandings of this period.

Each of the cemetery areas was in use for a considerable length of time: Cemetery I from the mid first until the fourth century; Cemetery II from the later first to the mid third century (with even earlier Late Iron Age burials perhaps acting as a focus). Cemetery III was possibly more short-lived, with cremation burial taking place from the later first to the late second century, but its inhumations may extend this span. Cemetery IV saw cremation burial take place from the early second to the mid third century, but also saw the site's last Roman burial, in a stone coffin and dating to the later fourth century (and possibly relating to the site's 'transitional' Romano-Saxon usage). Cemetery V, in contrast, seems

to have been fairly short-lived, bridging the Conquest Period.

Taken as a whole, *Mucking* was very much a *componented place/complex*; it was its respective parts that fostered its many cemeteries, whose diverse rites reflect the variability and roles of the settlement's evidently varied inhabitants.

Résumé

Des fouilles à Mucking, Essex, entre 1965 et 1978 ont révélé de considérables témoignages d'inhumation et d'occupation romano-britannique (ainsi qu'une extraordinaire séquence préhistorique, et ce qu'il reste de la plus grande occupation anglo-saxonne jamais découverte en Grande-Bretagne). Le recouvrement de données numériques enregistrées dans le cadre du projet de Suivi de Fouilles de Mucking a permis de mettre en phases le site et l'a interprété comme une occupation rurale à plusieurs phases, peut-être le centre d'un domaine, avec cinq zones d'inhumation associées dont certaines furent contemporaines, avec différentes zones d'inhumation réservées à différents groupes à l'intérieur de l'occupation.

Le campement attestait d'une évidente continuité avec l'occupation de l'âge du fer qui l'a précédé (ce qui est démontré par la production de poterie, la rétention et la réutilisation des enclos, et des similarités dans le style des constructions, entre autres). Certains types d'objets façonnés datables, tels que des monnaies et des broches, ont connu des séquences sans interruption pendant le premier siècle ap. J.-C., tandis que l'abondance de données relatives à la poterie indique fermement une industrie indigène qui a développé de nouvelles formes et matières, mais opérait bien à l'intérieur d'un cadre technologique et social existant. Les inhumations du premier siècle ap.

J.-C. reflétaient aussi des pratiques de la fin de l'âge du fer.

Le site a été témoin d'une transformation dramatique dans les dernières décennies du premier siècle ap.J.-C., essentiellement marquée par l'aménagement de l'Enclos Central, avec ses structures et divisions internes. Tandis que sa position et son orientation rendaient de toute évidence un certain hommage aux éléments existants, associé à l'établissement du système d'Enclos Sud qui l'accompagnait, il représente un remodelage dramatique de l'occupation, le tout avec une alimentation en eau organisée sous la forme de deux grands puits à l'intérieur. Il se peut que cette zone ait, toutefois, conservé encore une fonction rituelle.

Cette phase marqua aussi le début d'une production de poterie sur une grande échelle à Mucking. La Phase 1 vit la production de cruches à lèvres en bourrelet en matériau dégraissé à la coquille (partie de l'industrie céramique du bord de la Tamise de la fin du premier au début du deuxième siècle ap.J.-C.), dans la Phase 2 (du début-milieu du deuxième au milieu du troisième siècle ap. J.-C.) la production a évolué vers de la vaisselle brunie grise ou noire produite dans de grands fours ; cette poterie faisait de toute évidence partie des exportations vers le Mur d'Hadrien (peut-être à côté de produits agricoles du site, une activité de brassage est également en évidence).

Intérieurement, le site a vu d'autres événements tout aussi dramatiques après le milieu du deuxième siècle ap. J.-C., les importants puits de l'Enclos Central furent abandonnés (son puits principal fut rempli des débris d'un majeur assemblage domestique

apparemment de haut rang et d'un bâtiment associé incendié) Cela pourrait coïncider avec le total abandon de l'Enclos Central hormis pour la continuation des inhumations dans son cimetière associé et atteste d'une opération majeure de défrichage d'un terrain d'enclos. La production de poterie sur le site semble cependant avoir continué, quatre des fours (Nos 2-5) étant encore en usage à la fin du deuxième, et probablement jusqu'au milieu du troisième siècle. A ce moment-là le centre de l'activité du site semble s'être déplacé plus vers le système d'Enclos Sud.

Après le milieu du troisième siècle ap.J.-C. l'activité de l'occupation de Mucking devient plus opaque, et très peu de traits de coupure ont pu être attribués à cette phase (Phase 3), bien que la poursuite des inhumations, de la céramique et de la déposition d'objets façonnés indique qu'une forme d'occupation avait perduré, peut-être avec une production de poterie mineure dans un des fours. Vers la fin du quatrième siècle, ou peut-être dans les toutes premières décennies du cinquième, certaine de la poterie romaine la plus récente était étroitement associée au plus ancien style de poterie anglo-saxonne et à d'autre matériel du site, ce qui indique une utilisation contemporaine et équivalente. Cela implique l'existence d'une phase d'occupation romaine finale (Phase 4) qui comportait essentiellement une communauté anglo-saxonne. Compte tenu des récentes révisions de la chronologie du début de la période anglo-saxonne, ceci projette une lumière intrigante sur la transition, avec des implications radicales pour la compréhension de cette période.

Chacune des aires de cimetière fut utilisée pendant une considérable période de temps, Cimetière 1 du milieu du premier au quatrième siècle; Cimetière II de la fin du premier jusqu'au milieu du troisième siècle (avec même de plus anciennes inhumations de l'âge du fer final agissant peut-être comme point focal). Cimetière III fut peut-être de plus courte durée, des inhumations à incinération y ayant lieu de la fin du premier à la fin du deuxième siècle, mais il se peut que ses inhumations aient dépassé ce laps de temps. Cimetière IV fut témoin du déroulement d'inhumations à incinération à partir du début du deuxième jusqu'au milieu du troisième siècle, mais il vit aussi la dernière inhumation romaine du site, dans un cercueil de pierre et datant de la seconde partie du quatrième siècle (et ayant peut-être un lien avec l'utilisation romano-saxonne `transitionnelle' du site). Cimetière V, au contraire, semble avoir été d'assez courte durée, faisant le pont avec la Période de la Conquête.

Pris dans son ensemble, *Mucking fut réellement un lieu/un complexe à multiples composants*; ce furent ses parties respectives qui entretenirent ses nombreux cimetières dont les divers rites reflètent la variété et les rôles évidemment divers des habitants de l'occupation.

Zusammenfassung

Während der zwischen 1965 und 1978 durchgeführten Ausgrabungen bei Mucking in der Grafschaft Essex wurden umfangreiche Hinweise auf romano-britische Bestattungen und Besiedlung freigelegt (abgesehen von einer außergewöhnlichen Abfolge prähistorischer Befunde und der bislang größten in Großbritannien entdeckten angelsächsischen Siedlung). Dank der Wiederherstellung von Computerdaten, die im Rahmen der Auswertung der Grabung Mucking aufgenommen wurden, konnte die zeitliche Abfolge der verschiedenen Phasen ermittelt und der Fundplatz als mehrphasige ländliche Siedlung – möglicherweise der Zentralort eines Landguts – interpretiert werden. Dazu gehörten fünf Gräberfeldbereiche, einige davon gleichzeitig benutzt, mit verschiedenen Bestattungsbereichen, die unterschiedlichen Gruppen innerhalb der Siedlung vorbehalten waren.

Die Siedlung wies eine klare Kontinuität zur vorangehenden Besiedlung der vorrömischen Eisenzeit auf (was sich u.a. anhand der Keramikproduktion, der Beibehaltung und erneuten Nutzung von Einfriedungen und Übereinstimmungen von baulichen Konstruktionsmerkmalen zeigen lässt). Datierbare Fundgruppen, wie Münzen oder Fibeln, wiesen ununterbrochene Entwicklungsabfolgen über den gesamten Zeitraum des 1. Jahrhunderts n. Chr. auf, während die Unmenge an Daten zur Gefäßkeramik

deutliche Hinweise auf eine lokale Töpfereiindustrie lieferten, die zwar neue Formen und Warenarten entwickelte aber eindeutig innerhalb eines bereits existierenden industriellen wie sozialen Netzwerkes arbeitete. Ebenso reflektierten Bestattungen des 1. Jahrhunderts n. Chr. Gebräuche der späten vorrömischen Eisenzeit.

In den späteren Jahrzehnten des 1. Jahrhunderts n. Chr. erfuhr der Fundplatz eine dramatische Transformation, die sich vor allem in der Anlage der zentralen Einfriedung mit ihren internen Strukturen und Unterteilungen niederschlägt. Während ihre Lage und Orientierung offensichtlich Bezug auf bereits existierende Strukturen nahm, ist sie dennoch, zusammen mit der Anlage des südlichen Einfriedungskomplexes, Ausdruck einer dramatischen Neugestaltung der Siedlung, die auch eine organisierte Wasserversorgung in Form von zwei großen Brunnen in ihrem Innenbereich umfasste. Dennoch scheint dieser Bereich weiterhin eine rituelle Funktion beibehalten zu haben.

Diese Phase markiert auch den Beginn großmaßstäbiger Keramikproduktion in Mucking. In Phase 1 fällt die Produktion von Krügen mit Absatzrändern (ledge-rimmed jars) in muschelgrusgemagerten Warenarten (Teil der Themse-Ufer Keramikindustrie des späten 1. und frühen 2. Jahrhunderts n. Chr.); in Phase 2 (frühes bis mittleres 2. bis mittleres 3. Jahrhundert n. Chr.) verlagerte sich die Produktion auf grau und schwarz geglättete Waren, die in großen Öfen produziert wurden. Die Töpferwaren bildeten offensichtlich Teil der Exporte an den Hadrianswall (vielleicht zusammen mit

landwirtschaftlichen Erzeugnissen des Fundplatzes; auch Brauerei lässt sich nachweisen).

Im Inneren der Siedlung ereigneten sich andere, offenbar dramatische Ereignisse: nach der Mitte des 2. Jahrhunderts n. Chr. wurden die beiden größten Brunnen der zentralen Einfriedung aufgegeben (der Hauptbrunnen wurde mit den Überresten eines bedeutenden, offensichtlich sozial hoch stehenden Haushalts samt zugehörigem abgebrannten Gebäude verfüllt). Dies erfolgte möglicherweise zeitgleich mit dem Ende jeglicher Nutzung der zentralen Einfriedung, abgesehen von dem weiterhin für Bestattungen genutzten zugehörigen Gräberfeld, und bezeugt eine ausgedehnte Räumung ihrer Innenfläche. Die Keramikproduktion scheint jedoch weiterzulaufen, denn vier Töpferöfen (Nr. 2–5) sind Ende des 2. Jahrhunderts, und wahrscheinlich bis ins mittlere 3. Jahrhundert, weiterhin in Benutzung. Bis zu diesem Zeitpunkt scheint sich der Siedlungsschwerpunkt mehr in Richtung des südlichen Einfriedungssystems verschoben zu haben.

Nach der Mitte des 3. Jahrhunderts n. Chr. ist die Besiedlung in Mucking schwerer zu fassen, so lassen sich nur wenige eingetiefte Befunde dieser Phase (Phase 3) zuweisen; dennoch deuten Bestattungen, Töpferei und Niederlegungen von Gegenständen ein wie auch immer geartetes Fortlaufen der Siedlungsaktivität an, möglicherweise unter Einschluss kleinmaßstäbiger Keramikproduktion in einem der Töpferöfen. Gegen Ende des 4. Jahrhunderts, oder vielleicht in den allerersten Jahrzehnten des 5., ist ein Teil der spätesten römischen Keramik deutlich mit der frühesten angelsächsischen Keramik und anderem

Material in der Siedlung vergesellschaftet, was gleichzeitige und vergleichbare Nutzung andeutet. Dies impliziert die Anwesenheit einer angelsächsischen Gemeinschaft vor Ort während der letzten römischen Siedlungsphase (Phase 4). Angesichts der jüngsten Revisionen der Chronologie der frühen angelsächsischen Periode beleuchtet diese Tatsache einen faszinierenden Aspekt der Übergangsphase, mit radikalen Implikationen zum Verständnis dieser Periode.

Alle Gräberfeldbereiche wurden über verhältnismäßig lange Zeiträume genutzt: Gräberfeld I vom mittleren 1. bis ins 4. Jahrhundert; Gräberfeld II vom späteren 1. bis ins mittlere 3. Jahrhundert (wobei hier sogar wesentlich ältere Bestattungen der späten vorrömischen Eisenzeit als Fokus gedient haben können). Mit Brandbestattungen vom späteren 1. bis ins späte 2. Jahrhundert hatte Gräberfeld III möglicherweise eine kürzere Belegungsdauer, aber die hier ebenfalls niedergelegten Körperbestattungen gehen vielleicht über diesen Zeitraum hinaus. Gräberfeld IV wurde vom frühen 2. bis ins mittlere 3. Jahrhundert für Brandbestattungen genutzt, aber dort fand auch die späteste römische Bestattung des Fundplatzes statt, in einem Steinsarg und in das spätere 4. Jahrhundert datierend (und möglicherweise in Verbindung mit der Nutzung während der römischangelsächsischen Übergangsphase). Gräberfeld V scheint hingegen relativ kurzlebig gewesen und nur im Zeitraum um die römische Eroberung belegt worden zu sein.

Zusammengenommen stellt sich *Mucking deutlich als*

*ein aus seinen Komponenten zusammengesetzter Platz/
Komplex* dar; es waren diese verschiedenen Teile, die
die zahlreichen Gräberfelder unterhielten, deren
unterschiedliche Riten als Niederschlag der
Variabilität und der Rollen der offensichtlich
verschiedenartigen Bewohner der Siedlung zu werten
sind.

Übersetzung: Jörn Schuster
(ARCHÆOLOGICALsmallFINDS)

Roman Mucking ***Many Things***

This volume presents the results of excavations at Mucking, Essex (Figs. 1.1–2) relating to the site's Romano-British occupation, which took place between 1965 and 1978. While a 'rescue' excavation occurring in advance of (and often during) quarrying operations, it also aimed at near-total excavation of the archaeological features. The site was directed by Margaret Jones, but her Assistant Director (and site photographer, and husband) – W.T. (Tom) Jones – took the main responsibility for directing the cemetery excavations, co-ordinating much of the initial post-excavation research on them.

This volume is a companion to that which deals with the site's prehistoric sequence (Evans *et al.* 2016). That also deals with both the logistical/operational background of the excavations and their conceptual context. This ranges from the very notion of 'total archaeology' and the predominant 'dynamic' culturehistorical framework of the site's

interpretation, to the problems posed by its notebook-based record and the ‘type’-based approaches applied to its postexcavation. It is, however, the intention that this book can also serve as a stand-alone account for Roman specialist readers. Whilst therefore risking a degree of repetition, some of these issues must also be touched upon here, with all being more fully explored within its companion volume.

This aspired to be a much more straightforward and far less ‘problematised’ book than the Prehistory Volume, as it was thought that there was less need for contextualisation. This is largely due to the fact that there was less ambiguity regarding feature attributions and, as outlined below, there was an existing draft manuscript covering elements of the period’s archaeology. Accordingly, this book’s draft text was completed first, which was entirely in keeping with the site’s ‘archaeology backwards’ programme – proceeding from most recent to earlier (and most readily to least ‘knowable’). That said, such ‘time-slicing’ approaches invariably create problems at their temporal edges and sequences are rarely neat. This was certainly the case here, for having worked through the site’s prehistory – particularly the extraordinary character of its later/Late Iron Age – considerable revision of Mucking’s Conquest Period/Early Roman landscape was then needed. Coming to terms with the site’s Late Roman usage also proved difficult. This in turn now demands a significant reappraisal of its earliest Anglo-Saxon occupation, and in all this there seems an underlying circularity (see [Chap. 5](#) on *spiralling towards knowledge*).

While Mucking’s Roman sequence is relatively

uncomplicated, its publication poses major challenges. Further detailed below, there is, on the one hand, the scale of its assemblages and *vast finds numbers*. On the other hand, there are its *many parts*. Aside from its three main settlement foci – each seemingly having quite different functions – there are its five cemeteries. *The challenge here is how to allow for their meaningful articulation.*

Backgrounding and Prehistoric Sequence

The decision to start the excavation came as a result of the aerial photograph published by J.K. St Joseph (1964; Fig. 1.3); this clearly depicted the South Rings (then considered to probably be a Neolithic henge monument). While the Ministry of Public Buildings and Works had intended to schedule the cropmark area, this was not done (Jones 1993, 6). The trial excavations in 1965 were, therefore, conducted in order to gain familiarity with the terrain before tackling the monument itself (the Rings being excavated in 1966); what, of course, was revealed was an incredibly dense settlement palimpsest, of which the unexpected Romano-British Cemetery I formed a part. The aim of the excavations then became the ‘rescue of a multi-period landscape’ (*ibid.*).

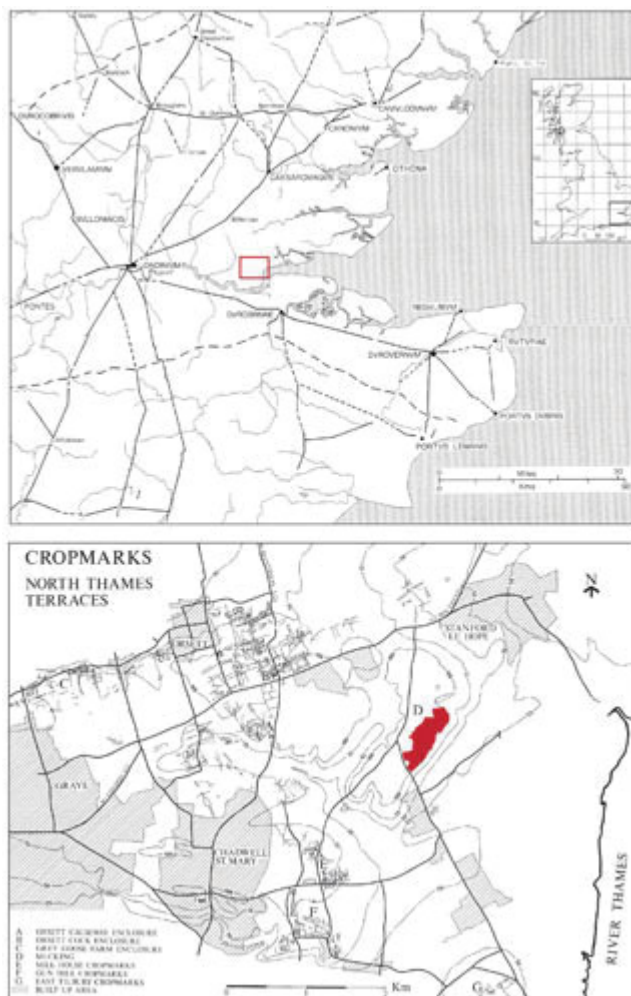


Figure 1.1. General Roman landscape location map (top) and, below, excavation area (red) shown in relationship to its environs cropmarks.

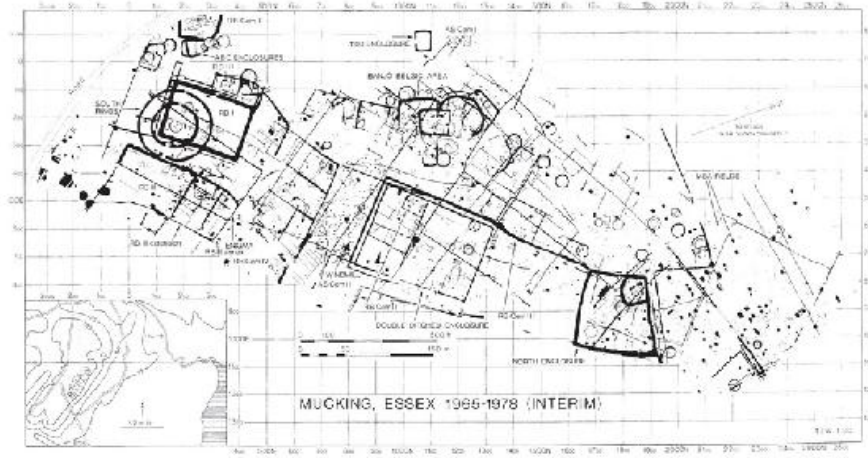


Figure 1.2. MPX-phase rendering of all features (top) and, below, site contours.

The Romano-British settlement at Mucking exhibits direct continuity from the later Iron Age, particularly in terms of continuing use and development of the Western Enclosure-area for industrial and craft-related activity, especially pottery production (this area was termed the ‘Banjo’ enclosures during MPX; see below). While a new kiln technology was introduced around the time of the Conquest, the pottery forms and fabrics display a continuous sequence throughout this transition. What is also new, probably in the

immediate post-Conquest Period, is the laying out of a more formal rectilinear enclosure system to the east of the Western Enclosures, comprising a ditched central settlement area (the Central Enclosure),¹ with a partitioned enclosure system to its south (the Southern Enclosures). In the second century AD, these more 'formal' parts of the settlement continued to be occupied and developed, but the western enclosure area went out of use. Both of these phases saw contemporary burial, within distinct cemetery areas. In the third and fourth centuries, the picture is more obscure, with much of the distinctly later fourth-century material culture found in features and deposits strongly associated with the Anglo-Saxon phase of occupation. Very few cut features can be assigned to the later Roman period; some burials can be seen to date to the third century, particularly the earlier part, with only a handful, at most, dating to the fourth century, but all indications are that the excavated area saw a decline in settlement intensity after c. AD 250/60. There are obviously significant dating issues that need to be addressed, and these will be fully dealt with below.



Figure 1.3. Aerial photographs; top, looking east with 1100 Enclosure and Belgic Banjo in middle ground and South Rings, ABC and RBI Enclosures upper right; bottom left, vertical shot, with South Rings, RBI and ABC Enclosures (note that comparing the structural/enclosure detail visible in this image with [Fig. 1.13](#) attests to just how much was lost through ‘early days’ quarry machining); bottom right, ABC Enclosures as stripped and immediately prior to excavation.

Romano-British cemeteries were located during the first season of excavation, and in the very last formal excavation (Cemetery IV, excavated in 1978 in

advance of reinstatement of farmland at the quarry edges). The final burial to be excavated was the site's one stone coffin burial (Grave 1086), discovered late in 1978 during quarry roadworks and after the formal end of excavations. (An emergency excavation was hastily conducted after the find was reported by the drag-line operator.) Excavation of the Romano-British burials at Mucking thereby frames the entire history of the excavations, with Grave 1 and Grave 1086 both published in this volume. Burials were also found within the settlement areas themselves, and were recorded using the same methods (see below and Prehistory Vol.).

The Joneses essentially viewed Roman Mucking as the infield and outfield of a Roman villa settlement, and they thus interpreted the cemeteries in this light. No villa building was ever found and, therefore, it was assumed that “the main area of ... Romano-British and Anglo-Saxon settlement must have lain on more fertile land further down the terrace slopes” (Jones 1993, 8). They eventually thought that the villa proper lay in the area of Walton Hall some 400m southeast of the site.² It would, though, have to be said that the interpretation of Mucking's Roman landscape was relatively little developed, at least in comparison to its Anglo-Saxon settlement (the same arguably being true of much of its prehistory; see below and Prehistory Vol.). Apart from highlighting its corn-drier, and the Central Enclosure's granary and main well in various *Panorama* notices (aka *Journal of Thurrock Local History Society*: e.g. 1974, 1979 & 1985), it was the associated pottery production that featured within interim reports (Jones 1972; Jones & Rodwell 1973;

see also Jones 1979).

Figure 1.4 is intended to convey something of the flavour of the Roman settlement's interpretation. Roger Massey-Ryan's 2004 reconstruction painting, 'Roman Villa at Mucking' is telling. Commissioned by Essex County Council, liberties have certainly been taken with the excavators' interpretations, so that the postulated villa has now migrated up from the terrace-slope to its crown. This was achieved by merging the two phases of the southern aisled barn building, thereby allowing its separate post-lines to become a colonnade. With no industrial activity depicted and by having its field/horticultural plots emphasised, the whole thing has been turned into a well-manicured farm-estate. Through the careful deployment of wood-scrub behind, the ambiguous status of the Western Enclosures/Belgic Banjo-area compounds at that time has also been masked.

A gem of Mucking's archives is Figure 1.5's uppermost illustration, as it effectively amounts to a 'cognitive map' of the site's main enclosure components (and must relate to ideas contemporary with the fieldwork). Indicating that the otherwise omitted prehistoric roundhouses and Anglo-Saxon sunken huts dotted the terrace, the North and South Rings are clearly entitled 'Late Bronze Age *Hillforts*'. The Iron Age North Enclosure is labelled as a 'Native Earthwork' in direct contrast to the Banjo complex's 'Belgic Settlement' (i.e. introduced populace), and also relevant is RBI's appellation as a '?Roman *Military Earthwork*'. In short, it tells of the project's dynamic invasion-/migration-dominated framework. Add to this its distinctly militaristic emphasis, and the sketch

plan expresses well the project's (increasingly outdated) culture-historical paradigm (see, though, [Chap. 5](#)). (While the Double Ditch/Central Enclosure is shown as 'Early RB farmstead', the eastern terraceside is labelled 'Ditch enclosed fields of Romano-British *villa*'.)

The same figure also includes the MPX-issued plans of the site's Iron Age and Roman phases ([Fig. 1.5](#)). Though the character of its Iron Age layout is discussed below, these early 1980s interpretations emphasise just how much of the site's sequence was then understood. Admittedly, this needs to be balanced by the 'Uncertain' phase plan in the same series (see Prehistory Vol., fig. 1.19) and its many thousands of small features (most of which appear to have been prehistoric). Nevertheless, we estimate that the Joneses had got 80–90% of Mucking's sequence 'right', with the only serious omission – and which amounts to the main 'discovery' of our programme – being the Late Iron Age's *The Plaza* ceremonial ground (see Prehistory Vol. chap. 6 concerning issues of the site's understanding vs. proof). Given this, it is only appropriate that at this point the site's prehistory is reviewed.

Mucking's earlier prehistory is relatively nuanced, when compared to many of the region's recent huge-scale massstripping excavations, as its intense overall excavationsample generated substantive quantities of residual-status pottery and flintwork (there being, for example, 26,740 entries recorded for the latter). As shown in [Figure 1.6](#) (and detailed in the Prehistory Vol.), this has allowed for the mapping of its successive earlier Neolithic, Grooved Ware and Beaker occupation clusters. Almost no distinctly Early Bronze Age pottery (i.e. Collared Urn) was recovered, but by this time the landscape must have been largely cleared as there followed the construction of its eight barrows. Dating to c. 1700–1400 cal. BC, and typical of the region, these were

relatively small (c. 4.25–14.0m diam.) and predominantly inhumation-associated.



POST CARD



Romano-British pottery clms 1452.

SAC CENTURY A.D.

Mucking, Loox.

The Romano-British Pottery Kilns at Mucking

J. M. U. JONES

with an interim report on Two Kilo Groups

R. W. J. RODWELL

SIMILAR

ROMANIAN BRITAIN pottery making or decorating is seen in its context, both in the Roman language of wild birds, and as part of a long tradition of pottery making from Early Iron Age to Roman.

Determination of its products will help to establish the typology and dating of coarse pottery along the north Thame's bank.

POTTERY making probably accompanied settlement at Mucking throughout the 1st millennium from the late Bronze Age to the end of the Migration period. Direct proof in the form of kilns is however known only for the Roman and immediately preceding periods. Six kilns of reddish Roman-British type have as far been discovered during the last seven years' work.² Earlier fragments and 'flints' which suggest there may be two more. The remains of about twenty smaller versions may be regarded as Ridge Roman prototypes.³

Domestic horses may have served in five niches (especially earlier than Age varies with their mixed existence) including coloring of red and black. There is considerable variety of finger impressions and also implies that printing was a household chore carried out by many individuals. The more consistently red and brown smears suggest that also ground clump hills, if which in time would be checked, may have been used.

The Mucking films are of interest on several counts, as teachers, in their isolation and in their self-contained content.

Considered in their context these kilns are notable, since five of the six kilns are sited in or beside field boundary enclosures of a Roman villa. The sixth lies outside its outfield boundary. (Fig. 1). (Although no romanized domestic buildings have yet been found, evidence for such a villa comes from pre-fabricated building tiles

¹⁴Chapman, R. W. and M. U. Jones, V. I. Schenck, N. L. Meyer, *Arch. FISH. EXPLOR.* 1972 15: 199-202, page 199 of this issue.

¹ "The Mockingbird," *Essex, every summer*, M. C. Jones, *Essex*, vol. 7, no. 2, p. 1924.

¹Early Stages: *protery* and *of* (Parrot, Farm, Cambridge, Oxfordshire), B. V. Archer & R. M. Jones.

BOTTLES OF GRAFFITI FROM MUCKING, ESSEN

A poetry type which seems to occupy a critical position in the Belgic or Romano-Belgic series is the *Marking*. Four, crop-mark settlements has an intrinsic interest in what it is proposed to call their northern profile.

Grass might be thought too grand a word. But there are not stumps, and although not usually limited to mammals, these counting symbols generally had individual meanings, so that the word *stump* with man's *stump* is sufficiently expressive.



Fig. 3. Grofts to jar (1) and types of grofts found at Moshing.

They have been seen on the shoulders of red-silver-horned ghazals (in, with single rounded horns (Fig. 2) and, occasionally, a slender horn, negative or *Convolvulus* 2557) and, most commonly, on the horns of wild sheep (in, with single rounded, internally ribbed horns (Fig. 3) and from which only one specimen at Mordak (and also at Bilibidyn School 218th) where many gazelles have been found by villagers of their actual race, and also their distinctive fibrous. This is a valuable new [?] item, probably originally designated and occasionally grouped, (from with robust horn structure into the full Roman period, and were made in the Mordak (Iran).

[illegible]

Figure 1.4. Roman Mucking ‘issues’: top, Roger Massey-Ryan’s 2004 reconstruction painting, ‘Roman Villa at Mucking’ (Essex County Council); centre, fieldwork issued postcard of kilns; below, interim publications.

The middle centuries of the second millennium BC were marked by a fieldsystem, with evidence of a broadly contemporary Deverel Rimbury Ware-associated settlement within the site's northern quarter.

Up to this point the terrace's remains could be considered as fairly typical of South Essex sequences generally, but it was during the Late Bronze Age that Mucking became 'special'. This is demonstrated by its two ringwork monuments: the single-circuit North Ring – dug by the Central Unit some 230m beyond the main site (Bond 1988) – and the South Rings at the site's southern end. The latter was double-circuited, with another much smaller concentric ring within its interior; both ringworks were settlement-related, and had evidence of metalworking and salt production/trade-control. Based on its ceramics, the South Rings appears to have hosted mass-gatherings in its final usage and – almost folly-like – it may well have been to this activity that its innermost ring related.

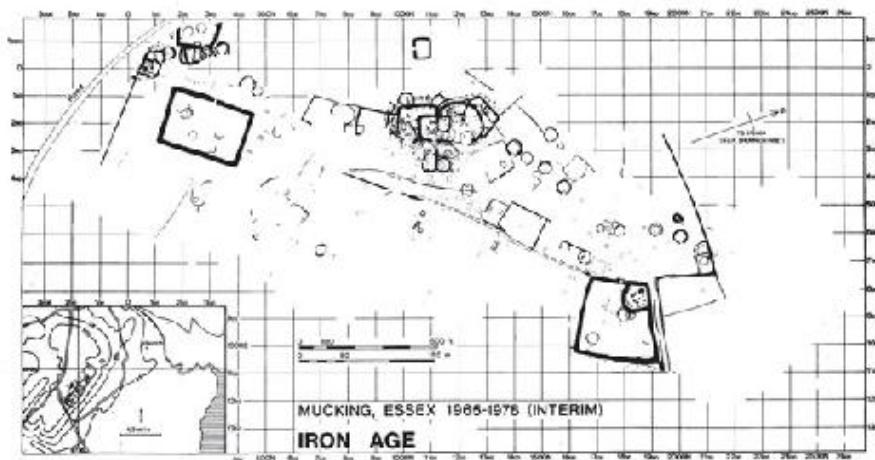
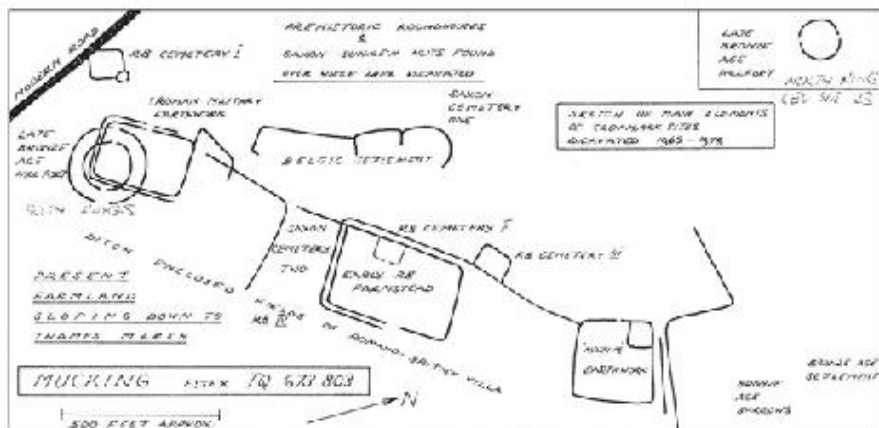




Figure 1.6. Prehistoric phase-plan 'cartoons'.

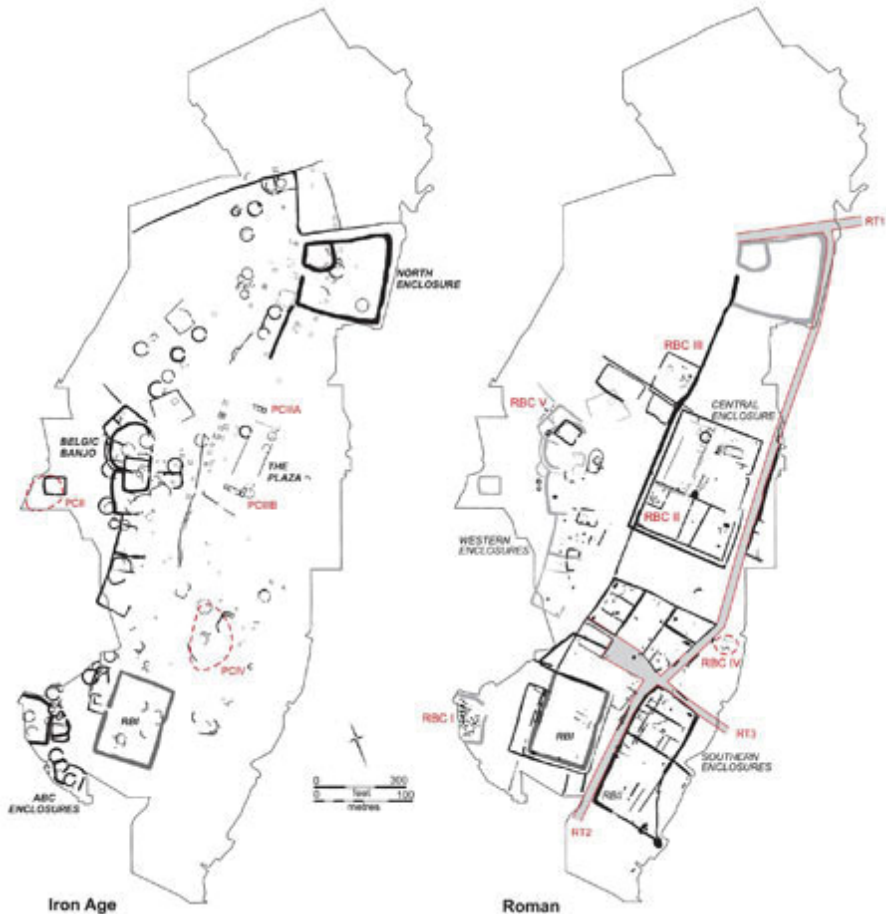


Figure 1.7. Iron Age and Romano-British phase plans.

Evidence of broadly contemporary salt-related production, as well as a scattering of roundhouses and other settlement features (e.g. pits and four-posters) – plus a small cremation cemetery – had been distinguished within the site’s northern quarter. However, when faced with only the partial study of the site’s prehistoric pottery, both for that period and the subsequent Early Iron Age, the extensive scale of its settlement could only really be plotted by analysis of the MPX pottery drawings and the distribution of other diagnostic finds-types (saddle querns and pyramidal loomweights, *etc.*). While based on what pottery studies have been conducted a few of the designated roundhouses could be assigned to the latter period (including the very large Roundhouse 39), through close scrutiny of the site’s base-plans further post-built Late Bronze/Early Iron Age candidates were identified. This has taken the possible number of buildings proper (vs. ‘posters’) attributable to that time up to nearly 50 (see Prehistory Vol., fig. 4.24).

There can be more assurance of the total number of roundhouses assigned to the Middle/Late Iron Age: these gullied buildings number 86 (Fig. 1.7). While many were directly associated with the site's main settlement compounds of the period – the so-named North and ABC Enclosures, RBI and the Belgic Banjo – more than half of the buildings were unenclosed and lay exterior to settlement compounds, with these tending to be the more robust gullies.



Figure 1.8. Quarry-face Excavation (I; Iron Age): left, on-going excavation of the Belgic Banjo complex (around whose circuit the intervening segment-baulks would later be removed); right, the northern square barrow range being dug hard by the conveyor belt.

Only the pottery from the North Enclosure compound was studied in detail, which indicated its probable establishment in the late fourth century BC and that it continued in use through to the mid/later first century BC. The site's three other compounds were also of Middle Iron Age origin, but of these only the ABC Enclosures in the south also ceased to function prior to the Late Iron Age proper (although it survived as an upstanding earthwork and, as such, went on to frame one of the Romano-British cemeteries).

The sequences of both the RBI and Belgic Banjo are fraught with ambiguity. Given the state of the site's pottery analyses, the distinction of its Late Iron Age wares proved difficult, and their eventual identification is charted through a series of case-studies within the Prehistory Volume. What proved most troublesome was the Belgic Banjo's sequence. Having a most extraordinary accumulative plan (Fig. 1.8), the morphology of its parts would certainly not suit a Roman date, although the distribution of the site's Early Roman pottery suggested this. Eventually it was realised that most of the Late Iron Age wheel-thrown wares had been subsumed within the Roman

pottery series and that a number of the Early Roman kilns had been inserted into the upper profile of the earlier, Iron Age ditches. It was only by analysing the pottery series by feature-depth that a resolution was finally achieved, with the result that only a series of later inserted small paddock-enclosures there – plus two granaries and a possible shrine structure – seem to be of post-Iron Age attribution.

The reason why so much effort was expended upon the untangling of the site's Late Iron Age pottery relates to the dating evidence of its metalwork and cremations (attesting to its 'Late' usage), and also the distinction of *The Plaza's* ceremonial ground. Throughout much of the site's fieldwork, the two arrays of conjoining small square barrows were evidently thought to have been 'Belgic houses' (Figs. 1.8–9 & 2.2; this being an issue discussed at length in the Prehistory Vol.). Although they were eventually recognised as barrow settings, they were never put together with other 'special' components in the immediate area. As well as the row of raised granaries (four-, six- and, even, a nine-poster) framing the western side of the two barrow groupings, there was also a series of densely set fence-lines arranged in a complementary manner between the barrows. These latter alignments had earlier been interpreted as relating to horticultural plots within the ensuing Roman Central Enclosure (see Figs. 1.7, 1.9 & 2.2). However, with their vague affinities to the layout of the great shrine complex at Fison Way, Thetford (Gregory 1991), we instead relate them to the area's Late Iron Age layout. As these settings truncated the barrows and seem to have been secondary within *The Plaza's* sequence, a Conquest Period attribution seems most apt. They evidently continued to stand throughout the later first century AD and probably into the next; a crucial point is that this enclosed area remained as 'reserved space' and no unrelated Roman structures were ever sited within it.

It was the distinction of this ceremonial complex that determined much of the interpretation of the site's later Iron Age usage. We cast around widely in an attempt to find a close British parallel for Mucking's square barrows and, whilst some offered generic similarities, it was only in France's Champagne District that a direct match was found for their conjoining 'cell' arrangements (Ville-Sur-Retourne: Stead *et al.* 2006). This recognition of a Gaulish connection was then explored in relationship to the site's imports: Dressel 1 amphora, *Terra Nigra* and *Terra Rubra* (the latter both as genuine imports and local imitations). While there are certainly no grounds to argue that this was a markedly high status community given their limited numbers, as well as the modest character of Mucking's Late Iron Age cremation burials, that it reflected a cross-channel connection nevertheless seems sound.



Figure 1.9. 'Phasing wall' plan of Central Enclosure and The Plaza's components (see Fig. 2.2 and Prehistory Vol., fig. 1.14).

Recognising this, there was one final element to consider: the evidence of the west-flanking granary alignment, termed by us 'Granary Row'. With their collective footprint amounting to 158sqm, it is estimated that they would have had sufficient storage capacity for

approximately 600ha of arable produce as an absolute minimum, enough to feed at least 100–150 families. This would be as opposed to the some four to 10 households that were then, perhaps, resident on the terrace, and whose arable requirements would have only required some 18ha. This must attest to *centralised grain storage*. It can only be presumed that this was for export and the issue of whether – following classical sources (e.g. Strabo IV.5.2) – this was direct to Gaul or organised via (or otherwise for) a more immediate regional authority (e.g. Camulodunum) is duly rehearsed within the Prehistory Volume, but needless to say is without any definite resolution. The Joneses' predominant 'transhumant Belgic shepherds' interpretation of the site's Iron Age inhabitants, while reflective of broader trends of the day, seems rather underdeveloped in relation to this.

In addition to various cremations scattered around the site, two other Iron Age cremation cemeteries were excavated, Prehistoric Cemeteries II and IV (IV being the square barrow-area); Prehistoric Cemetery V, located in the south-centre of the site, appears to have seen interment into the Conquest Period and is further discussed in [Chapter Two](#).

A significant difference with MPX relates to what has been assigned as Romano-British Cemetery V. With its main series of inhumations aligned on the back/northern side of the Belgic Banjo's outer 'squared' concentric circuit, this was originally thought to have been of later Iron Age date (and duly assigned as Prehistoric Cemetery III). However, the inhumation and cremation 'mix' of its interments – very few of which have any grave-goods – seems to broadly match that of RB Cemetery III. This, the dating of its grave-goods and the fact that some of its inhumations included hobnails, suggests that it was instead of Conquest Period date and that interment there continued into Early Roman times (i.e. Phase 1). It is therefore included with this volume's cemeteries; that it retains a prehistoric cemetery assignation reflects that fact that it probably had Iron Age origins.

Within the Prehistory Volume it is argued that Mucking's sequence effectively took off from the Late Bronze Age, variously propelled by salt and grain production. As witnessed by its extraordinarily high levels of buildings and burials per period, it thereafter supported sustained population levels until the end of the early Anglo-Saxon period (following a marked hiatus in the third/fourth centuries AD). A range of

factors contributed to this, particularly the terrace's immediate access to both marsh/estuarine resources and water transportation (see below).

The Joneses consistently emphasised Mucking's strategic location, especially in the light of its proximity to the Thames' Tilbury crossing. While they also characterised the site's sequence as a 'Landscape Palimpsest' – in other words, as an all-period *sample* of the archaeology in this region – in the companion volume what is highlighted is *the absolute specificity of Mucking as a place*. Many terrace-locales along this portion of the Thames could be said to have comparable strategic qualities, but there and there alone would have furnished a viewshed straight down the Thames' lower reaches (Fig. 1.10). In this capacity, the site's long-term Continental connections from the first millennium BC are outlined and it is argued that from the Late Iron Age these granted its sequence quasi-historical properties, whose specificities cannot be entirely comprehended. In some respects, this is *a matter of interpretation now coming full-circle*, as it resonates with Mucking's earlier, dynamic culturalhistorical paradigm, following decades when British archaeology was dominated by strict perspectives of insular continuity.

Situation, Excavation Context and Methods

The Romano-British enclosures at Mucking lay on the relatively flat terrace-top at 28–32m OD (see Figs. 1.1–2), although further unexcavated areas of the site no doubt lay downslope to the east. The subsoil throughout was well-draining gravel, with areas of

brickearth; the gravel produced excellent cropmarks, whereas the brickearth did not, and these differences were also evidently reflected in how easily archaeological features were discerned. Similarly, the site's geology greatly affected bone preservation (both human and animal), with it being very poor on the gravels.

One of the key factor's determining Mucking's extraordinary long-term sequence was its immediate location (see [Fig. 1.10](#)). Perched high on a terrace above riverside marshes, it would have allowed ready access to both seasonal pasture and tidal creeks for the purposes of saltmaking. The potential of Essex's coastal/estuarine archaeology has only been fully recognised during recent decades (see e.g. Wilkinson 1988, Wilkinson & Murphy 1995, Sidell *et al.* 2000, Wilkinson *et al.* 2012 and Biddulph *et al.* 2012, chap. 2) and, accordingly, in the Prehistory Volume Pete Murphy provides an overview of the site's environmental situation.

With its many parts – multiple cemeteries and enclosure foci – it has clearly proven difficult to do justice to the many facets of Mucking's Roman usage and it evades easy characterisation. In the first of the 'Archaeology of/in Essex' overview conference volumes (Buckley 1980), aside from mentioning the evidence of the site's fifth- to sixth-century Germanic immigrants (Margaret and Tom Jones respectively providing papers on Mucking and Essex's Anglo-Saxon settlement and cemeteries), Drury and Rodwell's Late Iron Age/Roman settlement study focused on Mucking's Roman military evidence (and the RBI enclosure), discussing this in the light of their posited

‘planned’ Thurrock-area landscape (1980, 64; see also Chap. 5, below). In the Writtle conference proceedings of 15 years later, Going (1996) in his ‘Roman Countryside’ contribution paid greater heed to Mucking, not unsurprisingly given his recent post-excavation involvement (see below). Aside from discussing its structures and cemeteries, he included a plan of the Central/Double Ditch Enclosure’s ‘farmstead’ (with no mention of the site’s military connection or of RBI; see also Going 1993a). Reflecting how few sites of the period had still then been excavated at any scale (and published) he noted: “It is salutary to reflect that DD Enc [Double Ditch Enclosure], together with the Orsett ‘Cock’ site (Toller 1980; Carter forthcoming [1998]) are perhaps the sole examples of what was perhaps the most typical rural Roman settlement type in Essex to have been excavated on the scale necessary to elucidate with any confidence their layout, chronology, and morphological development” (*ibid.*, 100). By the time of the most recent Essex conference (2011), while a plan of Mucking’s main enclosure appears alongside a number of other sites in a ‘medium and smaller farmstead’ illustration within Medlycott and Atkinson’s ‘Roman’ paper (2013, fig. 8), the site was otherwise not mentioned in their contribution. This tells both of the impact of so much recent developerfunded fieldwork and, too, the fortunes of sites whose publication is awaited for too long.

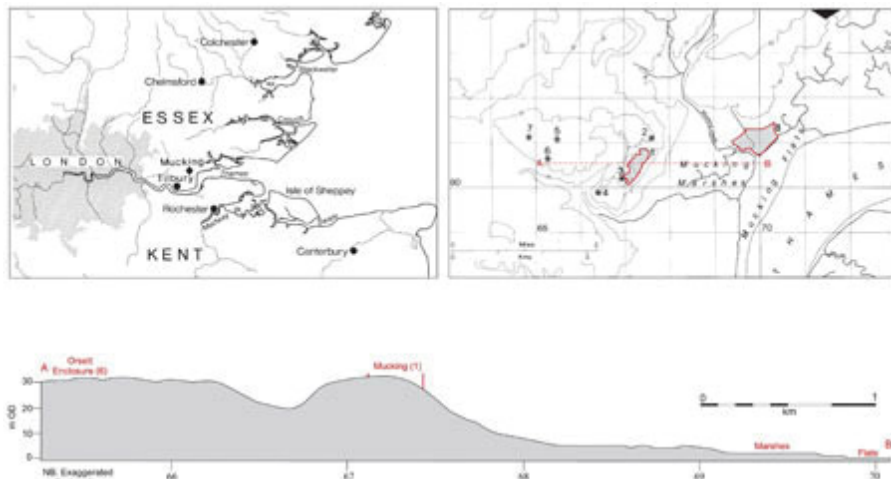


Figure 1.10. The site's down-river viewshed (upper left) and topographic profile (with exaggerated vertical scale; below) and location map: 1) Mucking excavations; 2) North Ring; 3) Linford; 4) Rainbow Wood; 5) Orsett 'Cock'; 6) Orsett causewayed enclosure; 7) Rectory Road, Orsett; 8) Stanford Wharf/London Gateway Compensation Site A (after Clark 1993, fig. 2).

Various other finds and settlement evidence have been reported in the vicinity. Romano-British fieldsystem/paddock boundaries extended across the area of the adjacent Linford Quarry investigations (Barton 1962), and were probably directly related to Mucking's settlement (see Prehistory Vol., chap. 1 and figs. 1.8 and 6.15). A kiln and probable settlement site were found 700 yards southeast of Chadwell St Mary parish church and a portion of a tessellated pavement during building work at the crossroads in Chadwell (Manning 1962, 136). Finds from the gravel pit in Sandy Lane, Chadwell St Mary comprise pottery, probably of the second to fourth centuries, and a coin hoard with a TPQ of the reign of Caracalla (AD 196–217: *ibid.*, 136–40). Excavations there in 1959 produced evidence for a settlement probably of first-

to later second- or third-century date, together with one heavily truncated wooden coffin burial (Manning 1962). Further discussed below, more recent excavations 2km away from Mucking at Stanford Wharf (Biddulph *et al.* 2012) have produced good evidence for a salt-production site in use during the first century AD, and again from the third to late fourth century AD. Otherwise, during the time of Mucking's fieldwork and its 1980s post-excavation aftermath, relevant comparative material would have been provided by the earlier and on-going excavations at Colchester and Chelmsford.

Within the site's immediate environs, though, of particular note was the fieldwork at Gun Hill, Tilbury (1969–70: Drury & Rodwell 1973; see Fig. 5.2.3), Orsett 'Cock' (1976: Carter 1998; see Fig. 5.2.4) and the Gray's Bypass sites (1979–80: Wilkinson 1988). Further afield in Essex, amongst others would have been the Kelvedon (1970–3: Rodwell 1988), Little Waltham (1970–1: Drury 1978), Chignall (1978–81: Clarke 1998) and Ivy Chimneys excavations (1978–83: Turner 1999), and later the 1986–91 work at Stansted (Havis & Brooks 2004) and Great Holts Farm, Boreham (1992–4: Germany 2003). With the exception of Chignall and Stansted, these were all quite small sites, usually of a hectare or less; it was really only with Elms Farm, Heybridge (1993–5; Atkinson & Preston 1998) that a Roman settlement was tackled within the region at a scale comparable to Mucking (c. 21ha exposed in total, with c. 9.35ha of investigation of dense Late Iron Age and Roman remains; *ibid.* and see Medlycott & Atkinson 2013).

The main point is just how little excavation context

precedent there was when Mucking was dug, and this is true for all its periods. Today we can take for granted that, in most instances, some manner of site parallels and comparable building/settlement layouts can be turned to, but these were simply not available in the 1960s and 1970s. In contrast, what is now known to be the density of southeast England's Roman settlement can be readily appreciated in Taylor's *Atlas* (2007), with the results of the vast numbers of post-1990 developer-funded excavations currently being compiled through the joint University of Reading and Cotswold Archaeology's 'Roman Rural Settlement Project'.

Further to this theme, the staggering amount of huge-project fieldwork recently conducted in Kent also provides crucial context within the 'Thames Gateway' (see Millett 2007 for summary); this will be referred to on many occasions in this volume. However, the most relevant site for Mucking's Roman usage is now Oxford Archaeology's neighbouring 2008–9 Stanford Wharf excavations (London Gateway Compensation Site A; Biddulph *et al.* 2012). Extending over 44ha along the north side of Mucking Creek and the Thames mudflats (including one of Essex's 'Red Hills'; [Figs. 1.10](#) & [5.17](#)), its significance here is its complementary location down in the riverside marshes off the terrace. Although excavations *per se* were limited to approximately a third of the area (in addition to watching brief monitoring throughout), they were accompanied by a programme of geoarchaeological sampling. For our purposes, the main result was its evidence of Late Iron Age to Late Roman salt production (see, also, e.g. Drury 1973,

118-22 and Rodwell & Rodwell 1973 for earlier findings from the Stanford-le-Hope area).



Figure 1.11. Quarry-face Excavation (II; Roman): Mike Pitts' site photographs of Central Enclosure area (top) and, below, excavation of a cremation.

Prior to discussing its fieldwork methods, the circumstances of Mucking's excavation have to be understood. The digging took place in a working gravel quarry, with excavation occurring close to the quarry face and its drag-line (Fig. 1.11; Jones 1993, 6). While the trial excavation of 1965 took place in an area clear of quarrying, thereafter the race to keep ahead of the dragline was constant (and some areas just had to be abandoned). As indicated in Figure 1.12, due to the location of vehicle haul-tracks and the quarry's working pace *etc.*, the archaeology went uninvestigated across substantial areas of the site to varying degrees. This is particularly true of its southern portion and, given this volume's concerns, it most severely impacted upon the recovery of features within the area of RBI and the Southern Enclosures (Fig. 1.13; see also Fig. 2.46).³ As is highlighted in Chapters Two and Three, across portions of those areas the damage was such as to make detailing of their sequence impossible. Accordingly, at least part of the later Roman sequence analysis will have to be based largely on finds distributions, rather than specific stratigraphic attribution as such.

Because of its early excavation, the area of Cemetery I saw a different stripping strategy to the other cemeteries and the main settlement areas. It lay in what was then farmland, and a front-loading Drott (rather than the requested box-scraper) was used to remove the ploughsoil after the harvest (Jones 1993, 6). Experienced workmen were then used to remove the subsoil, and a small team of archaeological students carried out planning and recording. Cemeteries and settlement enclosures excavated in

subsequent years lay in areas that were stripped using tracked vehicles towing box-scrapers; the excavation budget bore some of the cost of this in order to be able to choose a smaller machine (when available) and to enable supervision of the depth and direction of scraping. There was thus a limited amount of time between an area being scraped and it being quarried, in which excavation had to occur. From 1968, work continued all through the year, and excavation of some features was therefore carried out in far from ideal conditions (e.g. frozen ground surface, high winds, driving rain). Excavators and site supervisors were provided with a very detailed series of notes, complete with sample plans and sections, to try to ensure a consistent quality of recording (see Prehistory Vol., fig. 1.10).

The aim was the total excavation of features (rather than the selective sampling that is now standard). In some areas this had to be compromised, due to the speed of digging required to keep ahead of the dragline, but it is estimated that for the site as a whole, c. 75% of the archaeological remains were fully excavated and recorded (though some whole areas had to be abandoned with only cursory examination). Most features were tackled by spit-digging, where a predetermined level (usually 3 or 6 inches) was taken down in plan, with any finds recorded as coming from this 'level' within this feature. Often, the plans were superimposed onto one another on the plan sheets, resulting in a cumulative section drawing alongside a 'contoured' plan ([Fig. 1.14](#)). Barford (1995) offers an account of the excavation strategy, and the conditions encountered,

which serves as a useful corrective to those accounts that suggest methods used at Mucking were sub-standard (e.g. Dixon 1993, Clark 1993).

As the aim was complete excavation of all features on the site, in a sense the burials were not treated differently from any other feature (today, while burials would obviously be completely excavated, a pit would probably be 50% sampled and a ditch 5–10% sample-dug). In ideal circumstances, where a burial at Mucking had been recognised as such from surface soil-marks it would be taken down in plan, rather than half-sectioned first, as a pit or other discrete feature would be treated (or dug in metresections like a ditch). Usually plan-drawings were made at successive levels ([Fig 1.15](#)). Photographs would also be taken during and after excavation, and (as today) any grave-goods and skeletal remains or staining were indicated in notes and on the plans. In unhurried excavation conditions, recording can generally be considered good: the inhumations within wooden coffins in Cemetery I, for example, had every nail recorded and numbered on the plan series; moreover, their orientations within the grave were written on the individual finds bags for later integration with the records. The corollary to this, of course, is that when burials had to be dug in haste, recording could be cursory. Much depended on the individual excavator and on the supervisor maintaining the notebook records.

Tom Jones maintained the grave index in the field (as well as site notebooks specifically for burials), and a continuous numbering sequence for burials was implemented, such that Grave 24 could be followed by

Cremation 25 (inhumation burials were termed Grave, or GR, while cremation burials were termed CREM). The number of a burial can, therefore, give an idea of when it was excavated. Also encompassing Anglo-Saxon and prehistoric interments, all burials were included in this sequence, and all were located by the northing and easting of the grave's centrepoint. Although context recording was not used, the employment of recording by levels meant that most of the burials and their assemblages could generally be reconstructed with some accuracy.

The Joneses always intended to publish their excavations. The 'draft for definitive report' produced in November of 1976 listed, within the fascicule on 'Belgic to Romano-British', the three cemeteries then known (I, II & III), together with isolated cremations. The intention seems to have been to publish these as descriptions, followed by separate treatment of the finds, detailed treatment of specific grave groups (Graves 903 & 911 are described as examples), and a section on coffin nails. This publication method represents the standard treatment of Romano-British cemeteries at the time (cf. Down & Rule 1971 on the St Pancras, Chichester Roman cemetery). However, as is well documented (Clark 1993, 13–14), the demands of preparing the Level III archive for Mucking meant that any publication plans were postponed, and eventually responsibility for the site was passed over to the Mucking Management Committee, who instigated the phase of post-excavation (from 1986–92) funded by English Heritage and based in the British Museum (known as the BM/EH phase).



Figure 1.12. Site-area plan with areas of over-machining indicated by grey-tone (left) and its impact on finds distributions (centre: rotary querns; right, kilns and fire bar fragments).

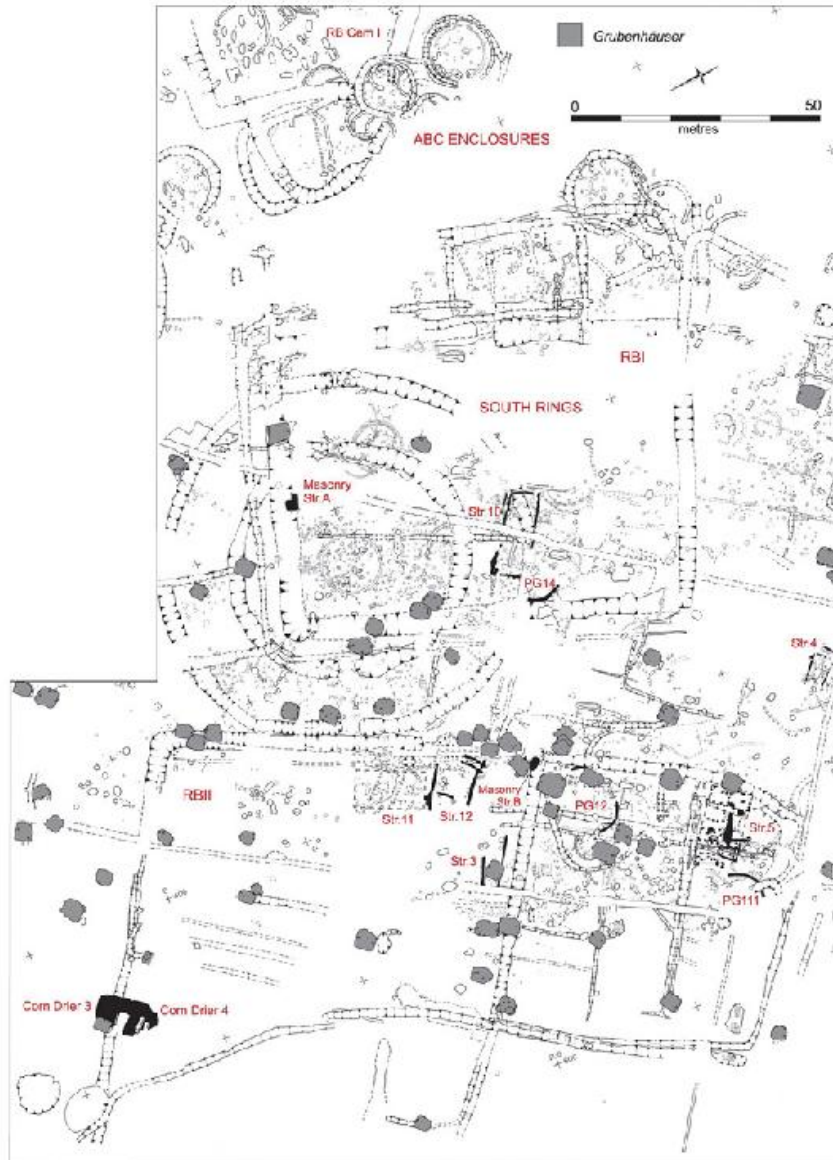


Figure 1.13. 'Raw' base-plan rendering of the South Rings, RBI and Southern Enclosures, with white swaths indicating unrecorded portions destroyed by the quarry works (with Roman-phase structures indicated).

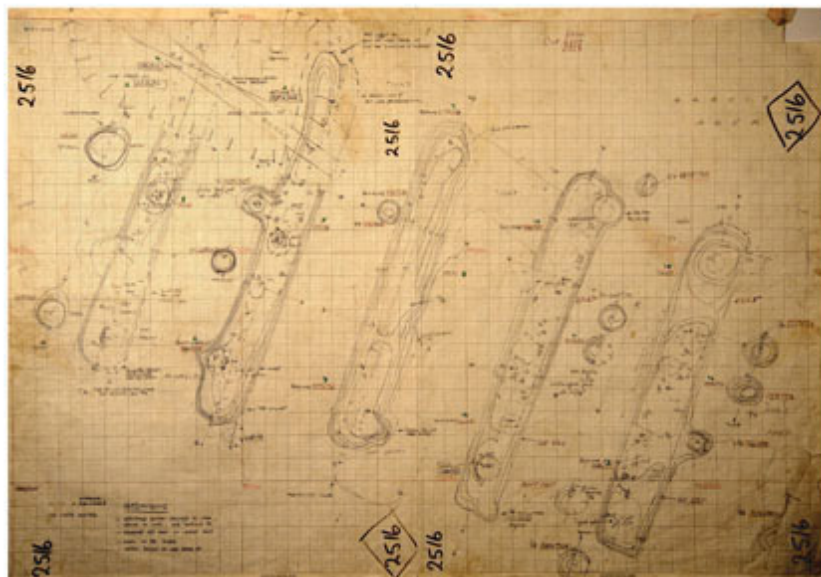


Figure 1.14. Worked up 'contoured' field drawing of Structure 1.

forward in 1987 included “a series of period volumes together with a general introductory volume”, and the Late Iron Age and Roman volume was outlined (with a stated completion date of March 1989). This obviously never appeared, and the archive had sat, largely untouched, until the current phase of work was instigated in 2007.

Base-line Sources

As outlined more fully in the Prehistory Volume, interpretation of the settlement sequence at Mucking has been heavily dependent on the two previous phases of post-excavation: the Joneses’ Mucking Post-Excavation (MPX), which ran from 1978 to 1985, and that of the British Museum/English Heritage team (BM/EH), from 1986 to 1992. From the latter, we have drawn upon the stratigraphic sequence for the site as outlined in the *Site Atlas* (Clark 1993); an unpublished manuscript by Chris Going on aspects of the Roman-period occupation that drew on work by Rosemary Jefferies (now Arscott) and Ruth Birss (now Leary) has also been used as a starting point for some elements of the text that follows (albeit with significant elaboration and alteration). Within Going’s intended volume, while all the site’s finds were to be reported, its archaeology was to be addressed through a series of ‘windows’ case-studies, variously focusing upon the RBI and Central Enclosures. The reporting of features from each of these was to be relatively thorough, with there being, for example, extensive accompanying section illustration. Our approach to the site’s features is generally more broad-brush and

less intense, and for reasons of production-expense there is far less illustration of specific features (the full mock-up of the original manuscript is, though, available within the site's archives). In fact, far more fundamental to our work have been the MPX archives, especially the computer cataloguing, and this is particularly true for the interpretation of the Roman settlement.

On first confronting the site archives, it became apparent that some elements of site interpretation were far advanced by the end of MPX, while others were less so. The kiln structures, for example, had already been individually described and discussed in a draft text by Jefferies, who has simply had to update her original text for inclusion here. Drafts of some well and many burial descriptions also existed. Other aspects of the site, however, have had to be written up after interrogation of the notebooks and finds information; this particularly relates to some of the wells and the structures (both timber and masonry), plus the various enclosure systems. As described in the Prehistory Volume, the Mucking archive is actually relatively easy to interrogate for these purposes. To aid the post-excavation process a microcomputer had been acquired by MPX (see Catton *et al.* 1981) and data-input files written to catalogue small finds and to produce rudimentary, but effective, site distribution analyses and plots of some finds (there are extant dot-matrix printouts of fired clay, flint, ceramic building material and environmental data, *etc.*; see e.g. [Fig. 3.33](#)).

Small finds and feature categories (graves, structures, drawing numbers, *etc.*) were entered onto

separate databases with a unique serial number allocated for each entry within an individual dataset. All data entries contain information on coordinates, level and notebook references. Not all catalogues were started or completed (for example, only a small proportion of the Roman-British pottery recovered from the surface), but a substantial amount of information was recorded. Data was stored on 8-inch floppy disks and retained within the archive, although the decision was taken by the BM/EH team to not employ or migrate this data during the second post-excavation phase (Clark 1993, 2). Fortunately – and to our astonishment – the data contained within these files proved both intact and usable. The data input programmes (known as ‘Question Source Files’) were well thought through and tightly structured, meaning that consecutive strings of data, each representing an individual record, could be reassembled into Excel spreadsheets, albeit with some considerable investment of time and effort.

Thus, although the notebook recording at first sight appears rather chaotic (the description of a single feature is often spread over several parts of one or more of these), the computerised archive provides the ‘key’ by which it can be unlocked. Data-sheets rescued from the 1983 disks include the notebook index (feature numbers and notes recorded against northing/easting, notebook number and page), and the plan and section index (ditto). After the relevant notebook pages and plan and section numbers have been identified, the relevant drawings and notes can be examined on the microfiche that exists of them all.

It is the finds recording, however, that has proved

fundamental. While the Joneses' programme of computer cataloguing has been much criticised (e.g. Clark 1993, Moffett 1989), rescue and re-examination of the data-sets has prompted a re-evaluation (see Prehistory Vol. for more detail). Some classes of artefact had been catalogued in full: lead and iron artefacts by Quita Mould, quern stones by David Buckley and Hilary Major, samian wares by Joanna Bird and their stamps by Brenda Dickinson, mortaria by Kay Hartley, amphorae by David Williams, Romano-British pottery by Ruth Leary, ceramic building material by Margaret Jones, fired clay and daub by Paul Barford and animal bone by Geraldine Done. No computer records existed for glass, copper alloy, brooches or coins, and these data-sets were created in 2008, with specialist reports commissioned. All MPX data-sets followed the same format in terms of contextual information: records always included a unique serial number, northing, easting, level, depth, feature type, feature number (where applicable), context description, and then relevant details of the material being recorded. Given the sheer quantity of finds generated by the excavations, some of these are immense, and the Romano-British pottery file, for example, comprises over 45,000 rows of data relating to over 140,000 sherds, with relevant data now recorded in 33 columns. While MPX was criticised for the detail in which the finds had been recorded (Clark 1993, 13), it has in reality proved invaluable when interrogating the various finds categories for significant patterning and associations. The following section will outline how, using this data, the Roman settlement sequence was established and will be

followed in the next chapter by details of the chronological phases.

Site Phasing and Analysis

How does one start to phase a site like Mucking? While we had available to us various Romano-British phase plans (both those produced during MPX by Ruth Leary, and later versions by Paul Barford and Chris Going), we could not be certain as to the basis on which they rested (see e.g. back cover illustration). Moreover, they largely represented the Romano-British period as a single phase (e.g. [Fig. 1.5](#)), whereas even preliminary examination of the site plan suggested a multi-phased development (as one would expect with a settlement of this date). This impression was reinforced by our review and analysis of the site's cemeteries (see [Chap. 4](#)). On investigating the archive, it was found that the burial gazetteers were well established, with inkedup drawings for publication completed. We thus undertook their reporting and analysis first, and this helped to establish that Mucking saw intensive burial activity within the first and second centuries AD, with an apparent subsequent decline; therefore, it seemed likely that this pattern would be reflected in the settlement as a whole.

As with any Romano-British settlement, understanding the pottery and other artefactual sequences was felt to be the priority, both for interpreting chronological development, but also in terms of being able to characterise the nature of activity and occupation at the site. Our first stage was, therefore, to commission a series of specialist reports

based on the computerised data-sets (or those created anew). Just one of these was already in existence: Bird and Dickinson's reporting on the samian (*terra sigillata*; see [Chap. 3](#); there was also a report on the amphorae by Williams, but its associated data-set was lost, and we have only been able to partially reconstruct it). These reports on the coinage, brooches, copper alloy, iron, glass, mortaria and other Romano-British pottery (with their associated dating of individual pieces) have enabled a more fine-grained phasing of the settlement features and enclosures.

When assigning features to phase, the detailed records assembled during MPX have proved crucial, particularly the method of recording each find by northing/easting, level and depth. The co-ordinates were generally recorded to the nearest foot (the site grid was in imperial measures), but where several features were recognised in a limited area more precise measurements were used (to the nearest inch). Finds from slots along ditches and other major features were usually labelled with the central co-ordinate of that slot, rather than their precise location within it. Depths, likewise, are usually given as a range (e.g. Level 2, 3" to 6"), rather than a precise point. These records are not, of course, perfect. Like any data-set, we have found errors (mainly at the stage of data entry, with numbers transposed, for example), and these have been corrected when found. Another issue is that contextual data was generally entered from finds bags, so surface finds may well not have been assigned to the feature they in fact belonged to (this only being identified and numbered at a later stage of excavation). The saving grace is, of

course, the '3-D'-like nature of the recording: the co-ordinates system means that (with the site plan now digitised) relevant finds can simply be plotted, and their associations noted that way. While there were also problems with the general lack of feature numbering (only a few feature-type series were numbered in the field), in practice most of the larger features were assigned a name of some sort (e.g. 'Inner DDE', for the inner ditch of the Central Enclosure, later renumbered Ditch A1A in post-excavation), while smaller features such as pits and postholes were *de facto* numbered by their central co-ordinate (e.g. 'posthole 1213N × 430E'). Even this is not the problem it might seem, especially as the post-excavation ditch labels were input for the Romano-British pottery.

The MPX Romano-British pottery data-set is not entirely complete: the decision was taken not to computer catalogue the pottery from Kilns 2a and 2b, as this had already been summarily published in Jones & Rodwell (1973). Given that the extensive pottery sequence from this kiln amounted to half a ton of sherds (c. 500kg, perhaps in the order of 20,000 sherds by comparison with contemporary sites), with over 3000 rims represented, this must account for a substantial proportion of the uncomputerised finds. Visual inspection of the boxes suggests that the remainder of unrecorded pottery comprises finds from surface clearing, and from minor features such as small pits and postholes. A data collation exercise by Chris Going, undertaken in the late 1980s, has proved useful here. In an attempt to understand the site

phasing at a time when there was no access to the MPX computer records, he created an index to the notebooks in terms of the dating information they held. Undertaken just for smaller features such as pits and postholes, Going noted on an extensive series of proformas the following information: Notebook number and page; northing/easting, BM/EH context number (where this had been assigned), and feature type. Each proforma row then had a series of codes relating to finds, which could be circled to indicate their presence (the extensive use of good artefact sketches in the notebooks made this a more productive and reliable exercise than might be thought). As can be seen in [Figure 1.16](#), this provides a complementary data-set to that found in the MPX computer records; although not as fine-grained, we have been able to draw on Going's work when phasing smaller features at the site. Crucially, where pottery from discrete features has been fully quantified, its date coincides with the broad phases provided by Going, suggesting its general reliability.

A potentially more problematic issue was the use of the spit-digging system. With fills taken down in 3" to 6" spits, finds were supposed to be separated into different 'layers' (i.e. archaeological contexts), but this did not always happen. Finds from an upper spit could theoretically belong to one of a number of different archaeological contexts. While this was taken into account when phasing the site, in practice larger features were phased by what they produced from their lower fills. At an early stage in our analysis it became apparent that many of the site's larger ditched features had remained significant hollows into later

phases (even, in the case of the Iron Age North Enclosure, into the Anglo-Saxon phase), and that they had seen high levels of artefactual deposition or 'catchment'. When assessing the point at which individual features were dug and subsequently infilled, information as to the varying dates of material (particularly pottery) in the lowest and uppermost fills was relied on. A ditch with significant quantities of later first-century pottery in its lowest fills, and fourth-century pottery in its upper layers was assigned primarily to the Conquest Period to later first-century AD phase (Phase 1), but indicated as a still open feature by shading on later phase plans.

Comparable problems also plague the origins of specific component-types, primarily the site's wells and buildings. Despite their 100% excavation, many of the post-built structures only yielded very few finds and, therefore, their dating is ambiguous. While substantial finds assemblages were forthcoming from a number of the site's wells, in some cases these seem likely just to date their main phase of use or backfilling, and not when they were first established. Accordingly, the site's phasing cannot just use dating evidence at face value, but also needs to account for the sequence's overall structural or functional 'logic'.

The phasing of the Romano-British settlement was obviously given extra complexity when it became apparent that the site saw considerable continuity from the later Iron Age, both in terms of its structural sequence, but also in its pottery production (see [Chaps. 2 and 3](#) for details). While the details of pottery analysis are given in [Chapter Three](#), it is sufficient to outline here that certain forms and fabrics

were identified as indicative of late Iron Age activity; their distribution suggests the Western Enclosure-area as the focus for both production and settlement activity.

Aside from the enclosure systems, the Romano-British settlement included a number of structural and other elements (Figs. 1.7 & 1.17). These are summarised below, and described in detail by phase in the following sections. Note, however, that, in terms of the site's sequence, arguably the most significant components are its deep wells. It is these that seem to have largely determined the longevity of occupation and/or activity within the settlement's specific enclosures. This itself may tell of the scale and intensity of the site's Romano-British usage, as such deep-cut water supply features were evidently not necessary for either the preceding Iron Age or subsequent Anglo-Saxon occupations.

Roads/Trackways

Somewhat surprisingly no roads or trackways had ever been defined within Mucking's Roman system; in hindsight, this seems a surprising omission given its layout. Here three routes have been identified (RT1–3). It should, though, be stressed that there is no direct stratigraphic evidence for any of these (e.g. evidence of metalling) and their recognition is rather based on enclosure layout.

The first is in the north of the site and is based on the presumed survival of the some 8.0m-wide trackway route that was defined as running between the Iron Age paddock system and the north side of the North Enclosure (RT1). The main routeway (RT2) would run, in effect, as a spine road northeast–southwest along the northeast side of the terrace, there primarily defined by the ditch-line aligned parallel with eastern side of the Central Enclosure. This suggests that its width at that point was up to c. 13.5–15.0m across. As indicated on [Figure 1.7](#), on reaching the Southern Enclosures (based on other parallel ditchline arrangements), this road then kinked southwest, and from there ran again northeast–southwest, going alongside the main

Southern Enclosures 'block', there being only c. 6.5m wide. (Continuity of access along the latter portion is demonstrated by the marking of this route by the Late Roman/earliest Anglo-Saxon distributions; see [Chap. 5](#).) The third routeway – RT3 – would have crossed the spineroad within the site's southern quarter. Indeed, it may have continued southeast and run to the settlement's putative Walton Hall-area jetty (see [Fig. 1.18](#)). As indicated on [Figure 1.7](#), based essentially on the site's Conquest Period system and the location of Prehistoric Cemetery V, on crossing the main spine road it is thought possible that this 'way' may, in fact, have abutted some kind of central 'open space' in the Southern Enclosures, which might conceivably have functioned as a market or similar.

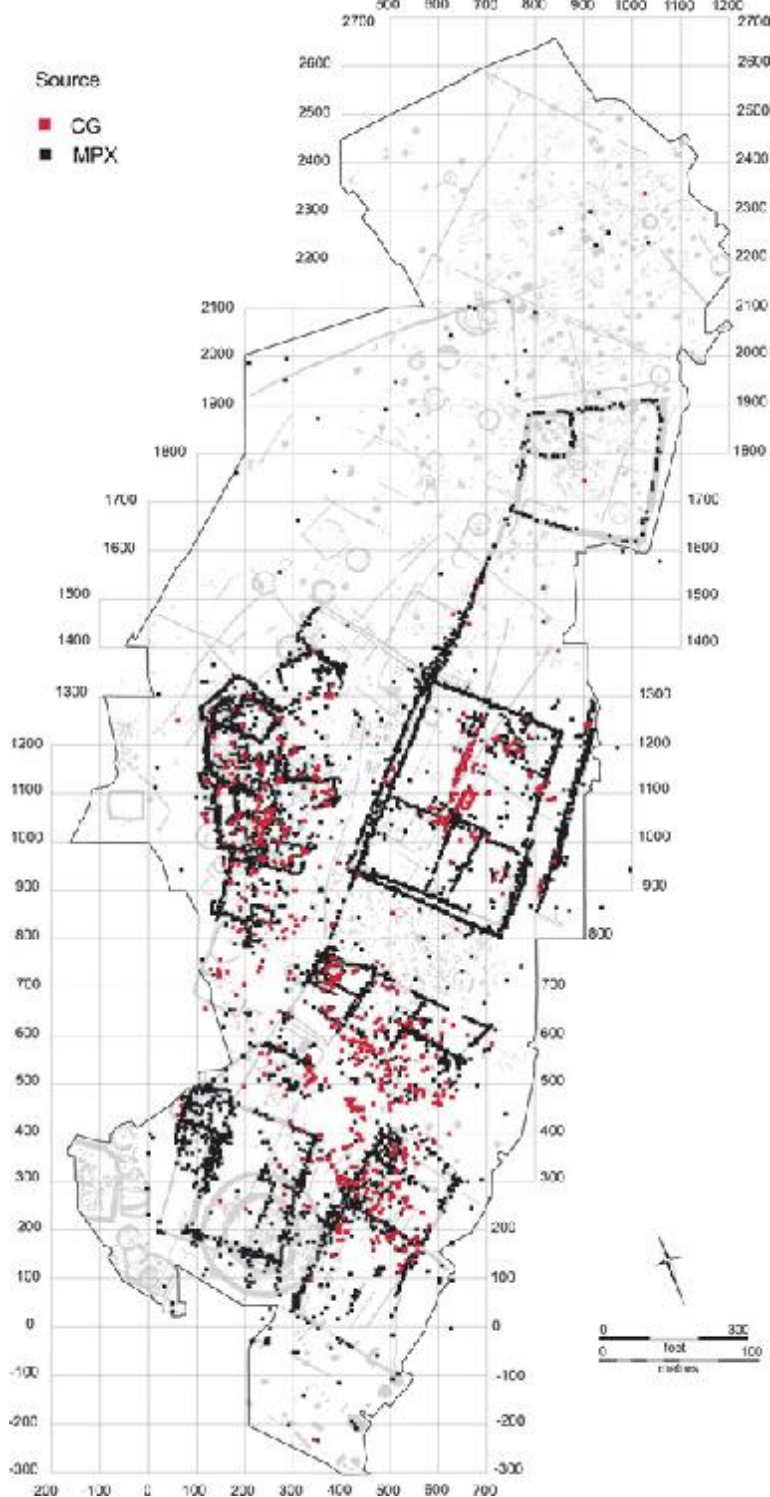


Figure 1.16. Plot showing spot-dated pottery as assessed by Chris Going and the original MPX recording.

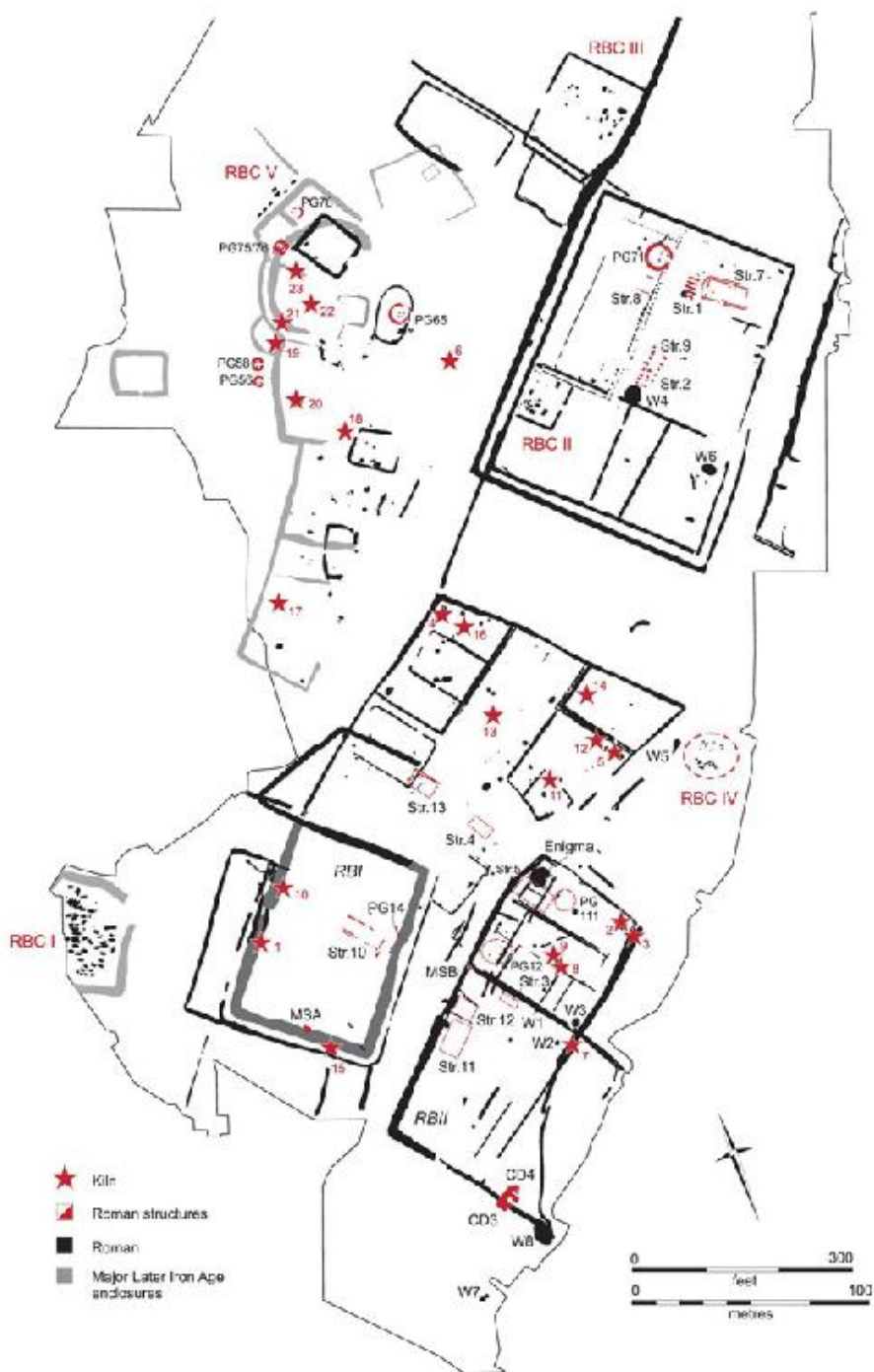


Figure 1.17. Roman Mucking, gazetteer plan with all kilns, structures and

Structures

A variety of structures were identified as belonging to the Romano-British occupation. Just four were of masonry construction, and all these were dated to the second to third century AD. All four appeared to have nondomestic functions, with two identified as malting floors (the second being a rebuild of the first), one as a possible kitchen structure, and the function of the fourth remaining uncertain. Otherwise, the main building material here (as on many other Romano-British rural settlements) was timber. These represented a wide variety of forms, encompassing rectangular posthole and slot-beam based construction, as well as roundhouses, and attest to a range of functions, with some being for agricultural and craft production, others for storage and for occupation (see *Discussion* in [Chap. 2](#)). Many of the posthole structures on the site were assigned to the Early Anglo-Saxon period (Hamerow 1993); however, given that a number of them produced Romano-British pottery but no Anglo-Saxon material from their posthole fills, it may be that some of these are also of Romano-British date, and that the total number of buildings associated with this phase has been underestimated. The large number of undated postholes from the site as a whole, coupled with the truncation and hurried excavation necessitated in part (e.g. in the Southern Enclosures-area), means that the Romano-British settlement at Mucking almost certainly had more structures than is apparent from the phase plans (see e.g. [Fig. 1.9](#)).

Wells

Eight wells were identified during the excavations. With the exception of the very deep Well 4 (located in a central position within the Central Enclosure), all were sited on the eastern edge of the excavation area, where the gravels met the brickearth; this location would have coincided with spring-lines. The wells belong to the main phases of Romano-British occupation. Well 4 seems to have been dug at approximately the same time that the post-Conquest enclosure was laid out (the inner ditch of the Central Enclosure); this must have been the principal well for the main settlement enclosure for at least the next century, with episodes of silting and recutting, before finally being infilled with what has been interpreted as the remains of a building (and its contents) destroyed by fire. The nearby Well 6 may have been dug slightly later, but seems to have been silting up (to

judge by the pottery in its fill) by the later first to early second century, with a major dumping episode from a diverse source in the third century.

Further to the south, Wells 1–3, 5 and 7a all date within the second century, though they may not have been in use at the same time and some may have been ‘sunk’ earlier. This preponderance of wells in the southern portion of the site adds support to the site phasing which sees the focus of settlement and activity shifting at this point; their number may point to a relationship with the intensive kiln production in the south of the site during this phase. Well 8, with its distinctive construction, may have had a different specialist function, but was also broadly of this date.

Kilns and Sub-kilns

In 1973, details of seven of the kilns found at Mucking were published (Jones & Rodwell 1973). Excavation was still continuing, but it seemed important to draw to wider attention the potential of the Romano-British evidence of the site. By the end of fieldwork, the total number of certain and probable kilns – not including rebuilds – had reached 23. Summary details of some of these were published by Vivian Swan in her *corpus* of production sites in the Roman province as a whole (1984). While this number includes all the likely structures and kilns, it is probably an underestimation of the total number of kilns that originally existed on the site. At least some are likely to have been removed by over-scraping. It is probable that some of the areas of fired clay including firebar fragments, if they are not dumps of material, denote the positions of other kilns.

There were seven large updraught kilns (Nos. 1–6, including 2a & 2b) and seventeen smaller kilns (7–23). The latter seem to have produced mainly shell-tempered jars (e.g. Jones 1972), while the larger kilns (except Kiln 1) produced a variety of products in more highly fired sand-tempered fabrics. The smaller kilns seem to be mid to later first-century AD in date; the larger kilns date from the later first to later second or mid third centuries AD. The depth of fired clay within the structures indicates both the intensity of heat and the length of firing and number of times the kiln had been fired. Attention is drawn to this, where appropriate, in the kiln catalogues within the phase descriptions below.

Pits

Hundreds of pits were assigned to the Romano-British occupation. While these are not individually described below, their nature and function are outlined in [Chapter Two](#)’s *Discussion*.

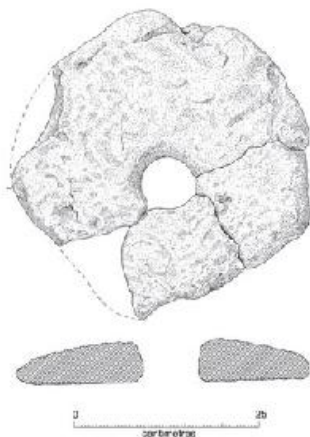
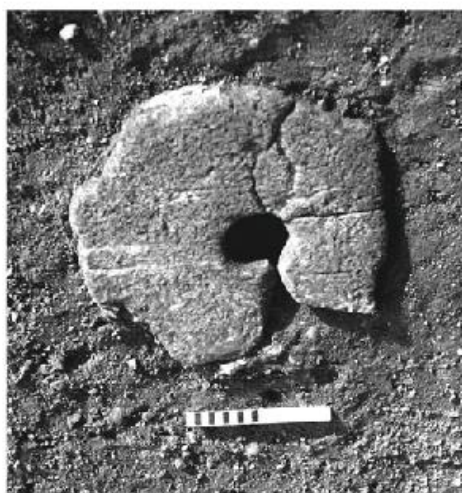
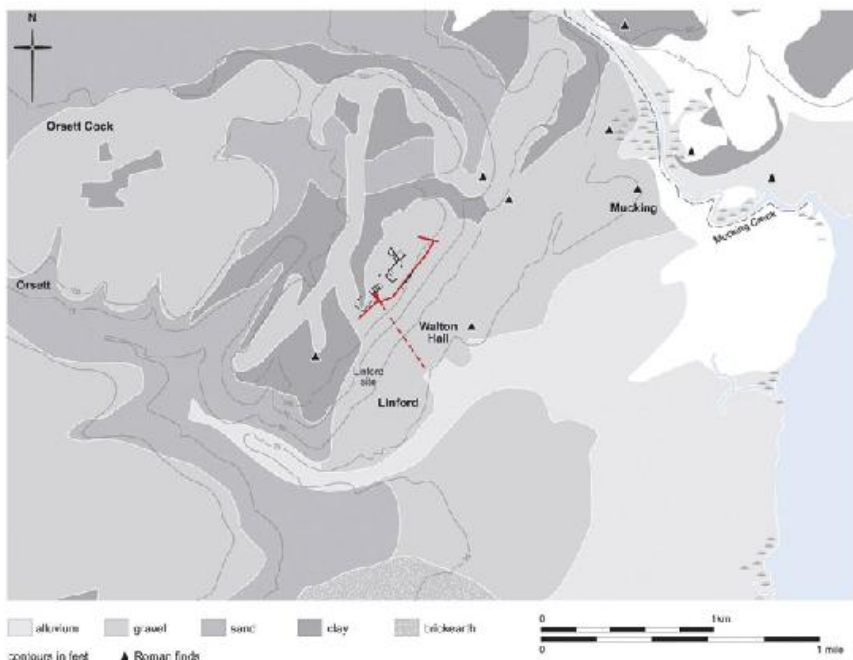


Figure 1.18. Early Roman Mucking, with trackway projection and possible quay location, and quernstone possibly reworked as an anchor.

Cemeteries and Isolated Burials

Five discrete cemetery areas of Romano-British date were excavated at

Mucking (RB Cemeteries I–V; see above concerning the latter's status), with further looser clusters of isolated burials. Numbering around 185 burials in total, the site saw both inhumation and cremation burial, with a variety of burial furnishing and elaboration employed. [Chapter Four](#) reports fully on the graves, presenting each cemetery in turn (with full gazetteers of burials followed by discussions of each grouping). The overall significance of the cemeteries and burial areas is discussed alongside the settlement evidence in [Chapter Five](#).

It was only after defining the settlement's probable roadway system, and then plotting its layout onto the topographic map that had been prepared for the Anglo-Saxon cemeteries volumes (see [Fig. 1.18](#)), that it was realised that the southern cross-route (RT3) might have continued southwest to some kind of tidal creek jetty facility in the Walton Hall area; a distinct embayment is evident in the underlying geology at that point. It should be stressed that no such linked creek has yet to be positively identified through environmental coring. This assertion is therefore only speculative, although might be supported by the large quernstone from the Roman settlement that appears to have been reworked as an anchor. In the course of the HS1 investigations a jetty facility connecting with the Thames was identified at the Springhead, Northfleet complex in Kent (Millett 2007, 160–1; Andrews *et al.* 2011) and, closer to hand, a probable boathouse was excavated at the Stanford Wharf Site (Biddulph *et al.* 2012, 101–2, figs. 5.20–2). It is likely that most of the major Roman settlements in the Thames Estuary would have had water transportation access; at Mucking this would have been important for its pottery and grain export (the basis for this being detailed in the text that follows). While, therefore, this postulated jetty requires future work to substantiate it,

on a number of counts its existence – whether or not it was located at Walton Hall – can only be considered probable.

Volume Structure

In the next chapter, the two main occupation phases – Conquest Period to early second century and early second century to mid third century – are dealt with in detail (with the site's Phase 3 aftermath also outlined), with discussion of their main enclosure layouts and components including structural, kiln and well descriptions. In that chapter, well and structure descriptions are by Grahame Appleby, kiln descriptions are by Rosemary Jefferies, and some aspects of the enclosure descriptions are taken from archival material by Chris Going and Ruth Leary (née Birss). This is followed by [Chapter Three](#), which, in a series of specialist reports, deals with the finds recovered from the settlement features. In an effort to interrogate the settlement together with its finds, that chapter concludes with a discussion section concerning artefact distributions and a series of depositional case-studies. The chapter on the burials then follows, whose finds reportage is integrated along with gazetteers of the burials, with individual discussions of each cemetery and the groups of more scattered burials. Last, [Chapter Five](#) considers the settlement and its cemeteries as a whole, setting the site into its local, regional and national context.

Running throughout as a theme is the impact of the Anglo-Saxon settlement on the representation of the Roman assemblage, as is also the significance of the

site's Late Roman material and what this implies for the dating of the earliest Anglo-Saxon occupation, particularly whether the latter actually amounted to a terminal Roman phase. Attempting to resolve this requires the marshalling of all the site's Roman data (plus some reappraisal of facets of its Anglo-Saxon). Accordingly, the entire question of the existence of this latest Roman phase occupation is largely left to the end of the final chapter.

With regard to this volume's labelling system, here the Penannular Gully series will be applied to roundhouses (PG no.), as employed in the *Atlas* (and as allocated in the BM/EH-phase). Within the Prehistory Volume, because of the much greater diversity of construction-types in these buildings, the more encompassing Roundhouse series was employed (RH no.). Their cross-referencing is, though, unproblematic as the PG designations used the same numerical series, with gaps simply left for other roundhouse types (i.e. PG71 here equates to the Prehistory Vol.'s RH71). Equally, while the letter-based MPX-phase enclosure and ditch labelling system is used here, that was found to be too unwieldy for the purposes of the Prehistory Volume and there, instead, a continuous Enclosure number system was implemented. In those few instances where relevant volume cross-reference is required here, both their letter and numerical designations will be given (see [Table 2.1](#) for cross-references).

This is generally a graphic-heavy volume and certainly, at points, differs from most comparable site reports. In part, this relates to Mucking's near-total

excavation policy, which ensured that it generated an enormous quantity of finds relative to the number of its major features (e.g. structures and wells). Some finds categories might still seem under-illustrated; this especially relates to the non-local pottery, as during the course of MPX relatively little amphora, samian or *Terra Rubra/Nigra* was drawn, for example.⁴ The other factor contributing to this volume's heavily illustrated sections also derives from its excavation policy and its subsequent distributional potential. This is something that we ourselves have long recognised as one of the most promising approaches to Romano-British site studies (e.g. Evans & Hodder 2006, chap. 7; Evans *et al.* 2013). Yet, more importantly, and as discussed at length in the Prehistory Volume, such distributional analyses were always envisaged by the Joneses and – along with establishing regional finds typologies for all periods – was the key motivation behind the site's intense excavation. Given this, as well as the sheer amount of collective labour that went into obtaining these finds assemblages (and continuously digging so many kilometres of ditch-lengths), it only seems fitting that distributional plots feature to the extent that they do in this volume and, wherever appropriate, artefact spatial analyses are brought to the fore.

It can be difficult to easily distinguish patterning within its finds distributions, such as Romano-British pottery as a whole. Here, the detail of the finds recording offers fantastic potential. Categories that are usually today only recovered on sites in their hundreds – for example, samian – here appear in thousands. Arguably, it is the number of the site's even more specific finds-types that is unique; 'things'

that are now only retrieved on most sites in handfuls – such as stamped samian or pottery graffiti/batchmarks – here occur in values in the range of a hundred, and it is this kind of data that has such unparalleled distributional potential. While given invariably ‘partial pasts’, it is unreasonable to think that their analyses will result in unambiguous answers, but it does mean that we can ask new questions of the data.

Despite this book’s aim of being a more straightforward account than the Prehistory Volume, there are significant ambiguities within the Roman sequence itself, beyond just the issue of the site’s Roman/Anglo-Saxon transition. As outlined within [Chapter Two](#) there is the aptly named ‘Enigma’ hollow, which proved something of a mystery during its excavation.⁵ Of greater significance is the weakness of the dating evidence achieved from most of the site’s timber buildings and – by way of complete contrast – the incredible quantities of pottery recovered from the site as a whole. As outlined above, this always has to be tempered by the fact that substantial tracts of the site, especially its southern part, went unrecorded and obviously a number of the period’s buildings must have been ‘lost’. Given the scale of the site’s pottery assemblages and that many of its major ditches were evidently left as open features and not thereafter backfilled, this leads to the unusual problem of pottery from all of the Roman phases being, in effect, nearly everywhere; the ditch profiles evidently caught a great deal of later material. It is only by analysing the pottery dates by depth than anything like a real picture of the lifetime of a well or an enclosure can be achieved. Had the Roman settlement’s sequence

proven complicated, the site's intensive excavation would have been invaluable. However, there are only a handful of instances where major ditch-lines cut each other and the 'over-abundance' of its pottery has proven a source of considerable confusion on the whole (see Prehistory Vol., chap. 1 on the problems of 'too much').

Certainly the impact of the site's intense overall excavation needs to be borne in mind throughout, especially concerning issues of finds-type representation. Again, the wider implications of the site's (non-) sampling strategy are more fully considered within the Prehistory Volume and here one example – the Central Enclosure's Well 4 – will have to suffice. If the site were to be excavated by today's low overall site sampling densities, such an extraordinary feature would still be dug in its entirety (vs. 50%). With more than 6,000 sherds and a wealth of small finds recovered from its 11m excavated depth, it yielded 1105 sherds of samian. At just under a fifth of its pottery assemblage (18.2%), this is far above the percentage of samian for the site as a whole: 1.9%. Because of Roman Mucking's vast total finds numbers, these kind of remarkable deposits can too easily become subsumed amid the site's 'mass'. With this issue further discussed in [Chapter Three](#) (*Distributions and Case-studies*), it is nevertheless imperative that an awareness of it is maintained. With its intense excavation and 3-D finds plotting, Mucking's archives still clearly offer tremendous potential to serve as, in effect, a statistical test-bed for gauging the application of site sampling methodologies (i.e. how would a feature's

distributions appear if only dug at a 50% or 20% sample, etc.; see Prehistory Vol., chap. 5, *Inset*).

Before progressing to the next chapter, something should be said concerning the entitlement of the Unit's series in which this and its companion volume appear: *Historiography and Fieldwork* (see also Evans *et al.* 2009). For our purposes we no longer consider these books as marking the final publication of an 'active' or contemporary excavation, but rather *an exercise in historiography*. That is, fieldwork from an earlier era, many of whose concerns are no longer current. Indeed, we see their publication as, in effect, an act of 'rescue' in its own right, in relationship to the site's amassed archives and the labours of so many. A logical outcome of this ethos relates to the situation and style of these two volumes. Seeing them as a matter of 'historiographic rescue', there was little reason to, for example, rework their usable graphics into a modern standard; with limited financial resources, this was not a difficult decision. Largely the legacy of the MPX programme and its low-cost labour, many of the project's wealth of inked handrendered drawings not only have a style that speaks directly of their time, but are often quite striking. Against this background (and the cost of not getting any publication out whatsoever for Mucking's pre-Anglo-Saxon phases), there seems little justification in being overly concerned with matters of uniform presentation. This is a luxury that we simply could not afford and our explicit intention is that these books have an almost 'scrapbook-like' quality. If what is valued are uniformly 'professional' graphics and

things in ‘polite’ style, then you will be left aghast by these two books (but nothing would have appeared otherwise).

Continuing a practice employed in the Prehistory Volume, in order to distinguish ‘raw’ archive or unrevised specialist contributions these have here been indicated in a font suggestive of a typewriter. The most relevant of these is Margaret Jones’ report on the site’s ceramic building materials; we thought it entirely appropriate that she appear amongst the volume’s contributors.

Notes

1 Formerly known as DDE or the Double Ditch Enclosure, and as it is referred to in the Prehistory Volume.

2 During the final fieldwork seasons they moved their caravans down there so that they could more readily inspect what came up through ploughing, with nothing convincing ever forthcoming (P. Barford pers comm.).

3 In this capacity — and reflecting upon the site’s ‘total archaeology’ — Figure 2.46’s aerial photograph is particularly insightful; the quality of the stripping explaining the ‘Not Cleared’ and ‘Not investigated’ labels on its accompanying plan. Even more telling are the deep scars of the quarry-machine’s tracks visible across the image’s left-side. Corresponding to the area immediately northwest of the RBII Enclosure, and where almost no archaeology was recorded (see Figs. 1.12 & 1.17), the extraordinary thing is the maintenance of such an intense excavation policy when faced with such a large degree of ‘loss’ (i.e. compromise).

4 The current programme’s fiscal constraints, as well as the fact that the finds are now stored in a Navy arsenal tunnel at Dean’s Hill, Hampshire (see Prehistory Vol., chap. 6), means that this material is no longer readily accessible for these purposes.

5 See J. Catton’s ‘recollection’ in the Prehistory Volume’s chapter 2 *Inset* on reporting that he was involved in its excavation to his schoolteacher.

Settlement Sequence

In this chapter, following an outline of the site's Conquest Period layout, the two main phases (later first to early second century and early second century to mid/late third century) are dealt with in turn, with discussion of their main enclosure layouts and components, including structural, kiln and well descriptions.¹ Interpreting later third- and fourth-century activity at the site requires more detailed consideration of the finds data, as few cut features appear to have been associated with this later phase. As will eventually be demonstrated by this means, the site did see occupation – if at a reduced level – over this span and, perhaps most significantly, its earliest Anglo-Saxon settlement effectively 'overlapped' with its Late Roman.

The structuring principles underpinning the site's phasing have already been outlined in the first chapter. Importantly, the essential elements of all of the settlement's main components and its functions were in place during Phase 1. These were subsequently elaborated and/or rebuilt in Phase 2, but

the site sequence then saw the staged abandonment of specific enclosure parts, with water supply a major factor within this process.

At this point it should be emphasised how partial (for entirely understandable reasons) was the recovery of archaeological features across much of the site's southern quarter. One outcome of this is that the Roman settlement appears to be just too 'simple' in relationship to the vast quantities of finds. This loss is particularly acute in the case of the site's Roman settlement due to the often slight traces of the period's beam-slot buildings. After scrutiny of the area's base-plans we have been able to identify a few additional possible/partial structures (see e.g. Structure 13 below). It is, though, likely that many more remain amid its unattributed postholes and small slot-lengths. Equally, others probably went entirely unrecorded within those swathes of the quarry works that were only 'roughly excavated' or otherwise completely uninvestigated (and where even planning was not possible).

Conquest Period Components – *A Sketch*

Before proceeding to outline the main Phase 1 features and structures, what effectively amounts to a 'sketch' of the site's Conquest/pre-Flavian period layout will be offered. With some of its elements already touched upon in [Chapter One](#)'s prehistoric summary, as well as being more fully presented in the Prehistory Volume ([chap. 4](#)), to some extent this amounts to a default category: components left, as it were, 'dangling' between the site's definite Late Iron Age and Phase 1

Early Roman features. Note that we will not here attempt to differentiate any kilns that might have been associated with this horizon from those of Phase 1 proper, and these are all presented in gazetteer format in the main Phase 1 entries below. The same is also true of the structures from the Western Enclosures/Belgic Banjo-area (even though it is likely that there were also of this date), with only The Plaza-related features being detailed here.

As shown on [Figure 2.1](#), in the southern quarter of the site the minor ditch-line concentric to the three sides of the RBI Enclosure (not along its northern side) may relate to a brief reinvestment of that enclosure, possibly army-related. Equally, the formal regularity of the ‘small paddocks’ along the northern aspect of the later Southern Enclosures-area appear ‘early’ and could suggest a degree of survey-planning not seen elsewhere in the layout of the enclosures; in other words, military involvement might also be inferred.

Within the Prehistory Volume the analysis of the Belgic Banjo complex’s pottery by depth/level indicated that all its main enclosure components were of later/Late Iron Age date. Although great quantities of Romano-British pottery occurred there, this largely related to its kilns of that date, with pottery accumulating in the upper profiles of the earlier enclosure parts. Only four small enclosures are actually held to be Roman: three of sub-rectangular form, Numbers 26–8 (respectively B38/39, B6 and B36) and which were probably associated with this industry; the fourth enclosure – Enclosure 29 (B31) – was of ovoid plan with a roundhouse in its interior (PG65) and appears to have, instead, been a sheepfold

or the like. [Table 2.1](#) sets out the equivalences between the enclosure enumeration of the Prehistory Volume and this one. Only four structures appear to be associated with this phase: PG75/76 – possibly a small shrine setting – and PGs 56, 58 and 78, which were gully-surrounded large four-poster granaries.² None of these would have had a residential function and it would appear that no occupation *per se* dates to this time; in other words, it just saw industrial activity. However, the occurrence of RB Cemetery V along the northwestern aspect of the Banjo's outer circuit might be seen as contradicting this, and it may be that buildings of this date have gone without recognition amidst this area's many unattributed features.

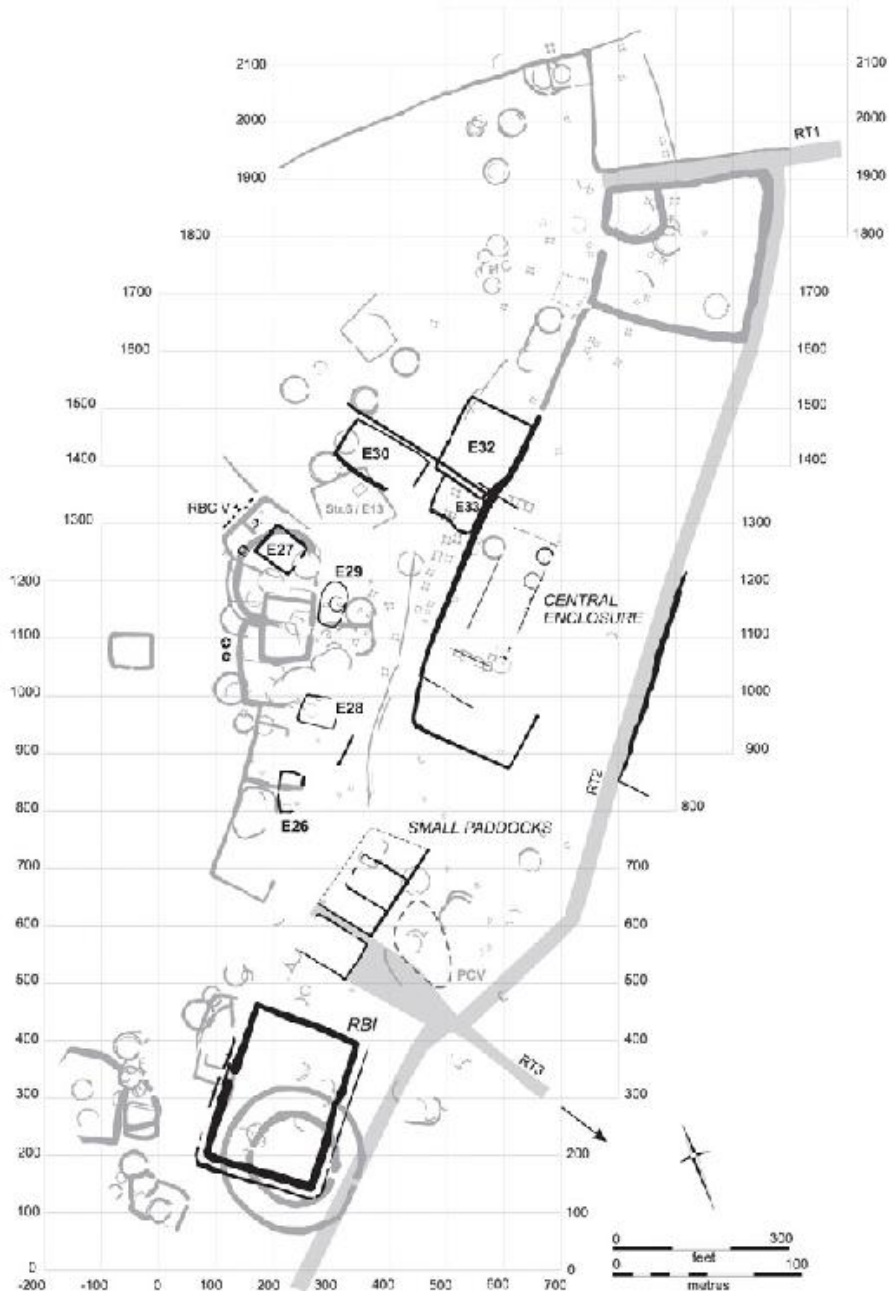


Figure 2.1. Conquest Period layout, with possible routeways (RT) and previous Iron Age layout indicated in grey tone.

Table 2.1. Table showing ditch enumeration equivalences (prehistoric and

Roman).

Prehistoric Enclosure Number	MPX Ditch Number
E1	Unnumbered
E2	Unnumbered
E3	Unnumbered
E4	Unnumbered
E5	D5A/D6/D7/D13/D18/ RBIII
E6	Unnumbered
E7	Unnumbered
E8	Unnumbered
E9	B2/B4
E10	B5
E11	B1/B2
E12	B7
E13	B32
E14	F7/F8
E15	North Enclosure
E16	North Sub-Enclosure
E17	Unnumbered
E18	Unnumbered
E19	Unnumbered
E20	Unnumbered
E21	B3/B33/B337/B43
E22	B37/B337
E23	B27
E24	B8/B9
E25	B30
E26	B38/B39
E27	B6
E28	B36

E29	B31
E30	Unnumbered
E31	Unnumbered
E32	A19/C1A/Unnumbered
E33	A19/C1A/Unnumbered

Only a few Late Iron Age buildings were identified. One was Structure 6, termed a ‘Belgic House’ by the excavators (see Prehistory Vol. figs. 4.22, 4.66–7). With evidence of higher status goods (brooches and a Dressel 1 amphora, *etc.*), this was set within a large sub-rectangular enclosure (13/B32), whose sides splay in a fan-like arrangement complementing that of the Banjo’s perimeter on that side. (Lying some distance to the north, an unnumbered enclosure, Enclosure 20 – also apparently of Iron Age date – had a comparable orientation and layout.)

Enclosure 13 (B32) was truncated by the southern side of Enclosure 30 (B23) and, arranged around/straddling a major ditch, were two other rectangular Enclosures – 32 and 33 (A19/C1A) – the latter of which truncated one of the Late Iron Age Granary Row posters ([Fig. 2.1](#)). These enclosures also had a complementary orientation with a short ditch-length that cut the side of the northern square barrow array, and all are thought to have been of Conquest Period attribution.

The Plaza’s ceremonial ground (see [Fig. 1.9](#)), the hub of the later Iron Age layout (and later area of the Roman Central Enclosure) – had as its main feature the fenced plot, whose southern side truncated the southern line of square barrows. Apparently opening flush along the eastern fence-line were two matching roundhouses (PGs 68 & 73). As is evident on [Figures](#)

2.1 and 2.4, there was clearly a precursor ditch-line of the Central Enclosure's primary circuit, which is thought to have continued the original Iron Age length of main 'spine ditch' (running along the eastern side of Enclosures 32 & 33/A19 & C1A) and then returning southwest, where it was recut by the Central Enclosure ditch and thus formed a large 'L'-shaped paddock.

The western side of this setting appears to have kinked in relationship to the earlier square barrow ranges, affording them respect. It is uncertain whether Well 4, the Central Enclosure's main water-source, had already been sunk by this time. That is probably unlikely, as the enclosure's main function would have primarily been of ritual/ceremonial character.

There are strong grounds to think that the site's trackways would also have been of Conquest Period date, at least in some form (Fig. 2.1). That in the north – RT1 – would in any case have been of Iron Age origin. The eastern northeast-southwest route – RT2 – would have run beside the eastern terrace-edge ditch-line (E1) and been parallel with the fenced plot and the terrace's Iron Age 'spine boundary'. One cannot be certain how far to the south it may have then continued, but is it likely that it met the RT3 route. For reasons outlined above, this would imply that the putative Walton Hall-area jetty access was a primary Roman feature. Moreover, RT3 would relate to the layout of the early 'small paddocks' (bisecting them) and border Prehistoric Cemetery V, where it is argued that interment continued into the second half of the first century AD.

The Fenced Plot and its Roundhouses

To facilitate reference we have designated the rectangle's individual side-lengths as Fence-lines/'FL' 1–5 (the eastern side apparently being reset; Figs. 2.2–3). While generally consisting of postholes c. 0.15–0.6m in diameter and 0.2–0.3m deep, there would seem to have been considerable variability in their setting and interval. Those along its southern and western sides (FL1/[15063] & FL2/[4200] respectively) were bedded within narrow troughs and where their posts were distinguished these were very closely set, being continuous or otherwise only up to c. 0.2m apart. In contrast, the north alignment (FL3/MC15048) was more widely spaced at c. 0.5–1.0m intervals. The main east-side line showed considerable variability along its length (FL4/MC15048 *et al.*). Over its southern end its posts were tightly set, either side-by-side or generally up to c. 0.5m apart. Its northern two-thirds demonstrated greater complexity and, possibly, reworking. There, for the most part, were oblong packing/setting pits, with up to two or even three postholes identified in some and, at one point, a continuous – if highly irregular – bedding trench extended over some 5.5m. While the distinction of this alignment was not itself continuous, generally the posts were closely set, with up to c. 0.5m between them. A second alignment (FL5/MC15608), much less densely set and consequentially less well defined, lay 0.75–1.5m east of FL4. While there were individual postholes, it generally consisted of larger pits (c. 0.35–0.6m diam.; 0.3–0.35m deep) and, though more closely set at some points (c. 0.5m interval), for the most part these were more widely spaced (c. 1.5–2.1m).

As mentioned, there is no avoiding the ambiguous status of these settings. On the one hand, the arrangement of their internal 'geometry' was somewhat irregular. Only the corner of FL1 and FL5 seems to have corresponded with each other (not FL1 and FL4); the northern end of FL4/5 extended beyond FL3's line, just as FL1 ran for some metres beyond FL2's return. On the other hand, nor do they appear to have continued beyond the boundaries of the Central Enclosure. Equally, two other broadly comparable post-setting troughs were distinguished within the Central Enclosure's southern interior ([4432] and north end of [4390]; *Atlas*, Sheet 11); these, though, were short lengths and not all of the scale of The Plaza's main arrays. Their dating evidence is sparse and consequentially uncertain. While probably relating to the extraction and/or resetting of their posts, some Early Roman material was recovered from the eastern line (FL4 & 5), and on the whole it seems reasonable to assign them a Conquest Period date.

The other components that must be considered in this context are the relationships of the fence-lines with three roundhouses, whose

entrances seemed to open flush onto the axes of FL2 and FL4/5 (Fig. 2.2).³ Certainly cutting FL4's axis, PG/RH71 is unequivocally of Early Roman attribution (early-mid second century AD) and is assigned to Phase 2. The round building it replaced, PG/RH73, apparently produced no dateable finds and could well have been Late Iron Age/Conquest Period. The attribution of the directly matching roundhouse immediately to the south, RH68, must similarly be only relative (Fig. 2.2). A small, seemingly square-plan gully-built structure (Structure 8; see below) that apparently truncated it had a few Romano-British grey ware sherds, but PG/RH68 itself just yielded small fragments of flint-gritted pottery (i.e. 'prehistoric'). Therefore while possibly earlier, based on its spatial relationships its attribution is thought likely to match that of PG/RH73.

PG68 (1203N/651E) – Excavation of the gully (15007) revealed that little of the structure survived, being only 2cm deep and 0.2m wide, with an entrance oriented towards the south (the entrance on the plan is 4.1m wide, but was probably narrower; Figs. 2.2–3). The penannular gully was 8.12m in diameter, enclosing 48.6sqm; its arc was cut by Structure 8 (see below).

PG73 (1246N/673E) – Situated adjacent to PG68, this was stratigraphically earlier than PG71 (Figs. 2.2 & 2.24). Consisting of a narrow penannular gully with a southeasterly oriented entrance (2.62m wide), it was 0.24–0.37m wide, 8.23m in diameter and enclosed an area of 58sqm. Due to later truncation by PG71, no internal features were positively identified.

It should not be surprising to learn that there is a degree of ambiguity concerning the relations of the fence-settings to the area's Romano-British features. Primarily, while the Phase 1 ditch A6A appears to have cut across its eastern and western sides, the northern terminal of the boundary along the east side of RB Cemetery II would seem to respect FL1's line (Fig. 2.2). Based on the evidence outlined above, it nonetheless remains reasonable to assign the fenceline settings to the Conquest Period and, probably with them, Roundhouses 68 and 73. There is no particular reason to assign these buildings any special status.

They do not evince any kind of ritual/shrine usage, but then nor would their succeeding Roman buildings, PG/RH71 and Structure 8 (see below). Leaving the role of these various buildings aside and, instead, concentrating of the spatial interrelationship of the fence-line rectangle to the square barrow arrays, the most apt interpretation for it is still as some manner of ceremonial ground.



Figure 2.2. Detailed plan of fenced plot, set against the Atlas base plan.

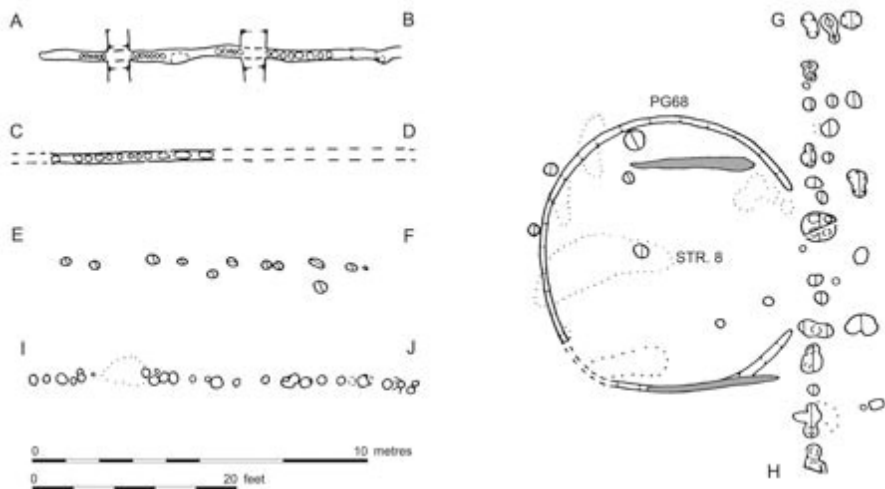


Figure 2.3. Plans of fenced plot lengths and PG68 (and Structure 8).

Phase 1 – *Later First/ Early Second Century AD*

The initial main Romano-British phase proper saw activity and settlement within three areas (Fig. 2.4). The focus appears to have been the Central Enclosure, with southeast-facing entrance(s) onto a probable roadway (RT2; see Fig. 1.7), which was bounded by ditch E1 to the east. Immediately behind this enclosure to the northwest (and occupying the terrace-crown) was the industrial zone of the Western Enclosures, whose various minor paddocks are thought likely to date to the immediate Conquest Period. As well as a roundhouse and granary structures, this area contained eight kilns, all but one of which were simple kilns producing shell-tempered pottery of the mid to late first century AD. The formalisation of the settlement evident in the establishment of the Central Enclosure was also reflected to its southwest, where another, more rectilinear, enclosure system was laid out (‘The

Southern Enclosures'). This, too, contained a series of early kiln structures, together with rectangular buildings evidenced by postholes and beam-slots. Each of these settlement zones will be described in greater detail below, with descriptions of their associated features.

Lying within the Central Enclosure, Cemetery II is thought have started at this time, and it is also likely that burial within Cemeteries I and III then commenced, with Cemetery V already in use.

The Central Enclosure

The laying out of the Central Enclosure directly elaborated the ditched arrangement of the Conquest Period (Figs. 2.4–6). In its initial phase, the enclosure was delineated by a single boundary (A1A). To the east, on the downslope side of the enclosure, was a formal entranceway, and there was perhaps another entrance south of this. The entire enclosure measured c. 127 × 95m. Its interior was subdivided, with a northwest–southeast-oriented ditch (A5A/A6A) creating a northern and a southern part; the southern part of the enclosure was further divided into three by two northeast–southwest trending ditches (A3A/A4A). Entrances to each of these were found: that into the southern divided area lying just to the west of centrally-located Well 4, with further entrances leading on into the other areas. The northern part of the enclosure contained all the identified structures: a beam-slot arrangement (Structure 1), interpreted as a granary by analogy with other known examples; a major posthole building (Structure 2); and, to the northeast, a major apsidal-ended building (Structure

7). Interpreting the latter structure's function is not straightforward and it will be discussed on more than one occasion below. It is possible that the two roundhouses associated with the fenced plot (PGs 68 & 73; see above) still stood at this time, before being replaced by PG71 and Structure 8. Obviously resonating with this 'ceremonial ground', Cemetery II is thought to have then been established, with early interments within Cemetery III – located just to the northwest – then commencing.



Figure 2.4. Overall Roman Phase 1 site plan, indicating the major enclosure and cemetery areas.

The only major feature identified in the southern part of the enclosure during this phase (aside from a

small amount of pitting) was a second well, Number 6.

The Enclosure

The Central Enclosure was laid out on the predominant northeast-southwest alignment, its ditching (A1A) comprising a single cut with squared-off corners (Figs. 2.5–6). The ditch was up to 2m wide and 1m deep, with sloping sides and a concave base. The resultant enclosure appears to have been continuous, save for the main entranceway, and for an interruption where it apparently petered out to the south. It is not certain whether it was actually interrupted as such at the latter point, and there it may have suffered from over-machining. However, since this portion of the site was covered in brickearth, it is also possible that the feature was simply impossible to distinguish.

The principal entrance was on the southeastern side of the enclosure, some 36m from its northwest corner. It included a gateway structure formed of two parallel rows of three major postholes, set 4.5m apart and projecting into the enclosure's interior, with a further posthole (for the gate pivot of a presumed two-leaved arrangement) set centrally between the middle pair. To judge from the spacing between the boundary ditch and internal dividing ditches, the upcast from the enclosure ditch may have been used to form an internal bank approximately 2m wide. The gateway structure projected some 4m into the interior of the enclosure, and would, therefore, have penetrated through any internal bank. Nothing can be said of the details of the superstructure of the earthwork, but it may have been provided with some form of stockade or hedge.

The enclosure was variously divided into four unequal parts by ditches and fence-lines. The principal subdivision was ditch A5A/A6A, which ran parallel with the short sides of the enclosure, dividing it into two unequal rectangles. The ditch was c. 1.7m wide and 0.46m deep. Close to its mid-point a causewayed entrance linked the two halves of the enclosure. The southern portion was itself divided into two by a ditch A3A, c. 1.2m wide and c. 0.4m deep. Here, too, a single causewayed entrance linked the two sub-enclosures. To the east of this, a third ditch, A4A, appears to have divided the southeastern portion into two parts. Excavation there appears to have been restricted to a few principal features (including Well 6); this ditch was of similar dimensions to that of A3A.

With its location clearly referencing the earlier, Late Iron Age range of square barrows, the 'L'-plan ditches of the sub-enclosure delineating Cemetery II were probably then established, with early interments

commencing therein.

The northern sub-enclosure was divided into two parts by the earlier fenced plot which, along with PGs 68 and 73, has been described above (see *Conquest Period*).

Structures

Given the paucity of its dating evidence, it has been difficult to determine whether Structure 7 should be assigned to this phase or the next. It was eventually decided that it was best allocated to this enclosure's primary phase; a major reason for this is its slightly skewed orientation to the enclosure, but which seems to match that of Structure 1. Whereas the latter represents a granary, and Structure 2 an aisled barn, with its apsidal end Structure 7 appears 'special' and is unlikely to have been strictly agriculturally-related. That said, the few finds directly associated with it provide few clues as to its function; that is instead inferred from other feature assemblages within the area.

As discussed above, within the area of the fenced plot, PGs 68 and 73 possibly stood throughout this phase; PG71 is described under Phase 2 below.

Structure 1 – This was 8.35m long and 4.6m wide, encompassing c. 38.25sqm. Centred on 1197N/715E, the building consisted of five parallel beam-slots/trenches (Figs. 2.7–8; see also Fig. 1.14). The c. 4.6m long and 0.6– 0.75m wide slots (6502, 6504, 6508, 6563 & 6565) represent construction trenches into which posts had been inserted. A few of their post-pipes ('ghosts') were identified; it is presumed that these would have been set into sill-beams that ran the length of the slots (some of the upright posts probably projecting through/below the sunken sill-beams). These indicate that Structure 1 was a substantial building of a plan and construction method similar to those found on both military and civilian sites that have been interpreted as granaries (e.g. Manning 1975). The southernmost slot was truncated by a pit (6506), but is presumed to originally have been of a similar length to the others. Postholes within the slots were between 0.25m and 0.38m in diameter and, in total, 0.17–0.33m deep. Some late first- to mid second-century pottery sherds were recovered from the features.

Structure 2 – Located between Well 4 and Structure 1 (1072N/645E), this building may have predated both (Fig. 2.7). It is also likely that the building's northwestern posthole, 15324, was truncated by a later posthole related to Structure 9, although this relationship is uncertain; a further posthole (15248), cut by Well 4, may also be part of

Structure 2. Constructed from large paired postholes (c. $0.4 \times 0.9\text{m}$; $0.2\text{--}0.4\text{m}$ deep), these represent a substantial timber building, 7.6m long by 4.3m wide. It is probable that the posts formed the central support for an aisled building, which would thus have been larger in area; though there was no trace of any outer walls. Several postholes provide evidence of having been replaced during the building's use, with the structure itself probably entirely replaced by Structure 9 (see below). Very little material could be definitely assigned to the postholes of this structure, but stratigraphically it predated the second-century Structure 9, and is assumed to date to the later first century.

Structure 7 (1290N/760E) – Located within the northeast corner of the Central Enclosure, this consisted of a rectangular post-in-trench structure with small posts or stakes inserted into a construction ditch, c. 0.25m wide (Contexts 6486, 6490, 6500 & 6531; [Figs. 2.7–8](#)); these probably represent wattle uprights and were recorded on three sides of the building. The eastern end was poorly preserved, although part of the construction trench was identified. Internally, the building was c. $17.4\text{m} \times 8.35\text{m}$, with an area c. 145.4sqm . A similar minor external ditch/trench (6488 & 6537), with rounded corners at the western and eastern ends, surrounded the structure (over $20.3 \times 10.3\text{m}$; c. 197.8sqm). Whilst possibly representing an eavesdrip gully, in its northwest corner were a series of stakeholes (MC6510). These may be evidence of external support for the roof or for hurdles used to fence off the structure; however, it is thought more likely that this feature rather related to the building's double-/‘solid’-wall building technique. Identifying internal structural elements is problematic, as the area was disturbed by two subsequent Anglo-Saxon buildings (PHB20 & PHB37; see Hamerow 1993). A 1.8m -wide entrance was, though, centrally located on the southern side, flanked by two large postholes (6470 & 6472). A second entrance, 1.65m wide, was located at the western end. Finds from Structure 7 were limited, with pottery from postholes and wall-slots (mainly grey ware jars) of second-century date. Attributing a function to this building is challenging as it could have been used for several functions.

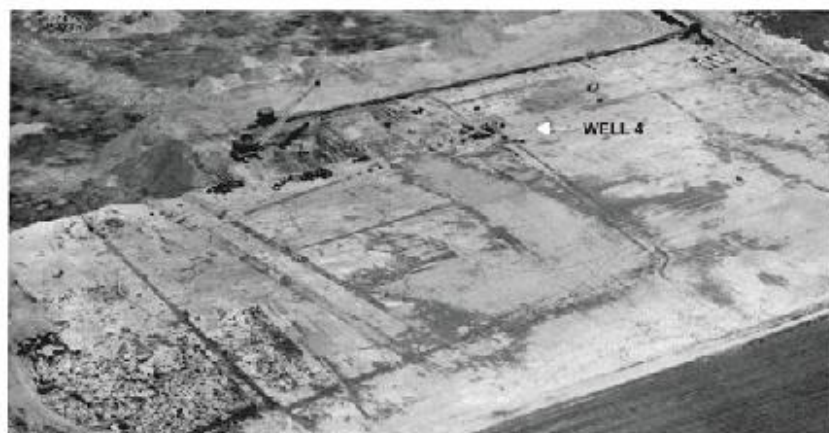
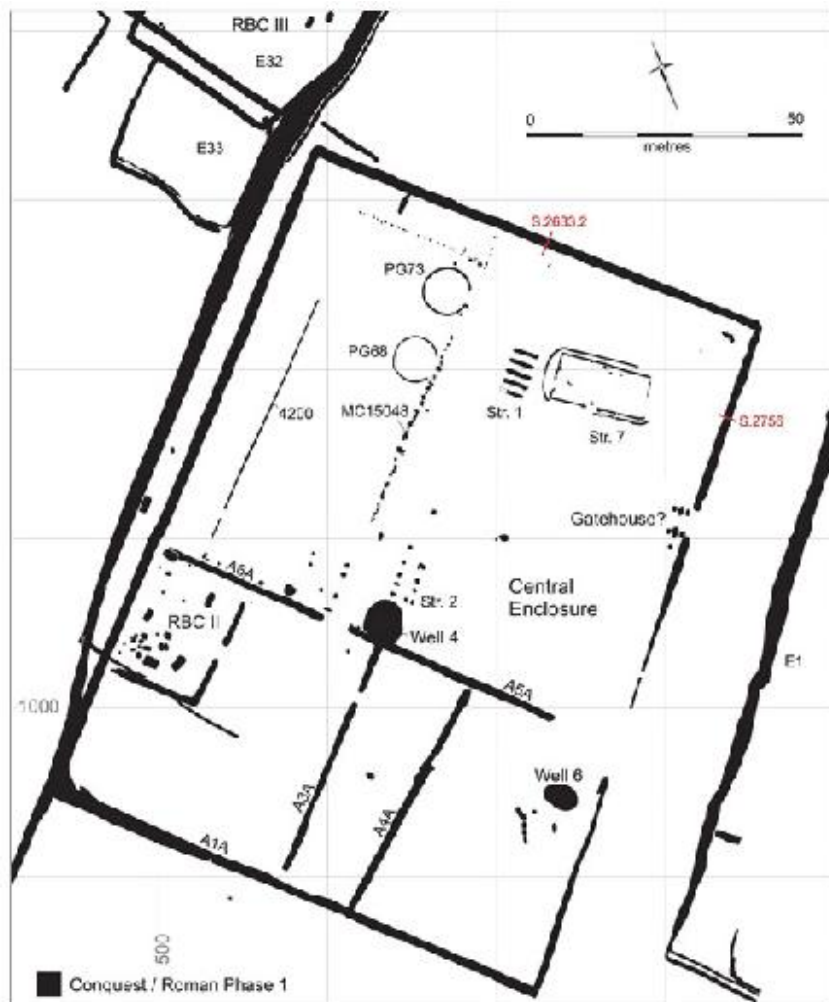


Figure 2.5. Central Enclosure: Phase 1 plan with feature labels and locations of sections; below, aerial photograph (from east) of area under excavation, notice the looming presence of the quarry's conveyor-line along

its western side (and on-going excavation of Well 4).

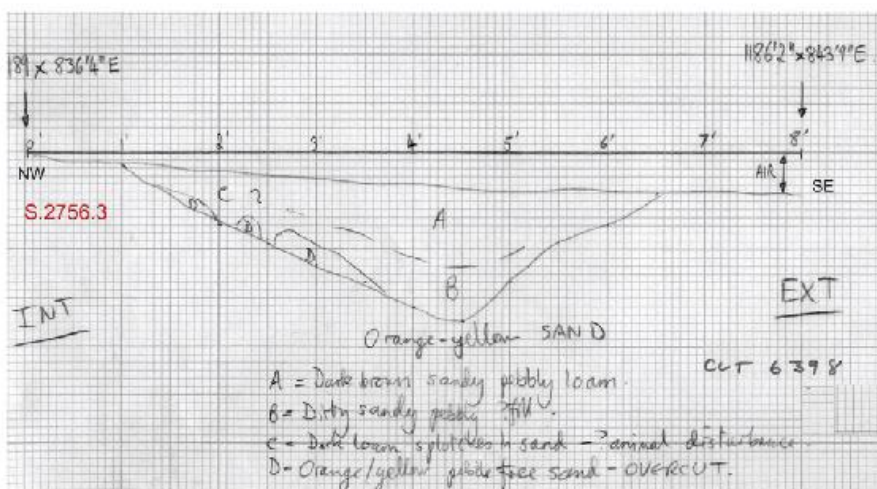
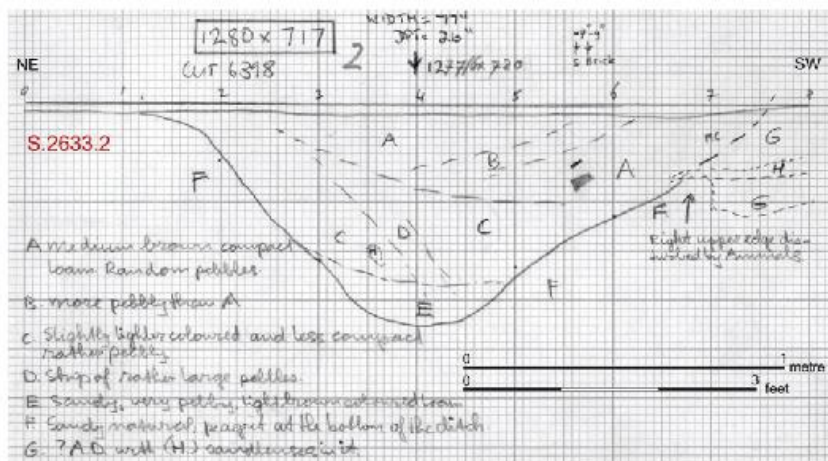


Figure 2.6. Hand-drawn sections through the Central Enclosure ditch.

Structure 8 (1202N/651E) – Situated in the northwest corner of the Central Enclosure within the area of the rectangular fenced plot, this consisted of two parallel construction trenches/slots, oriented northwest–southeast and lying 6.4m apart (Figs. 2.3 & 2.7). The northernmost was 3.63m long and 0.3m wide (0.08m deep); the southern was 5.12m long and 0.2m wide, and they delineated a space of c. 26sqm. The purpose of this structure is unclear and the finds from it were sparse, just grey coarse wares.

The Wells

The two wells within the Central Enclosure were deep at c. 13.1m and 15.25m ([Fig. 2.5](#)).⁴ This is in contrast with the settlement's other wells, which were variously situated along the eastern side of the Southern Enclosures and within its southeastern quarter, and only had to there be sunk to relatively shallow depths (1.55–4.5m deep; most c. 3.0m) as they were located at the interface of the terrace's brickearth and gravels. Both of the Central Enclosure wells had impressive finds assemblages, with that from Well 4 being vast, its backfilling evidently representing much of the contents of a high status building and, therefore, being of great significance for the interpretation of the enclosure as a whole.

Well 4 – Located close to several structures (Nos. 2 & 9; 1052N/632E), this warrants a detailed assessment ([Figs. 2.9–10 & 3.38–39](#)). One of two wells found within the enclosure, it was initially identified after surface stripping as an oval pit measuring c. 4.6 × 4.3m. Excavation in spits, however, revealed the 'pit' to be a large well dug deep into the gravels, which contained great quantities of pottery and other finds. These included 6059 sherds, plus 1105 sherds of mainly Antonine samian, with a minimum of 31 EVEs represented (Bird & Dickinson below suggest a date of AD 160–70 for the bulk of this group), mortaria (at least 18 sherds), amphora (125 sherds; mainly Dressel 20 and Gallic forms dated to the late first to later second centuries AD) and glass (21 shards; both window and vessel). Other finds were 133 fragments of tile – including *tegulae* (12), *imbrices* (23) and *tubulae* (7) – with burnt daub (1.4 metric tonnes as reported on in more detail in [Chapter Three](#)), lumps of sandstone, numerous nails, iron objects (rod, windlass fragments?, sickle/horseshoe), iron slag, and copper alloy metalwork (min. 60 objects and fragments, including rings, tweezers, hair-pins, needles, corroded and burnt sheet, a pendant, bronze vessel fragments, riveted straps and a cart finial; see below). A possible wheel-felloe was also found. Further details of the finds and their interpretation can be found below, in [Chapters Three](#) and [Five](#).

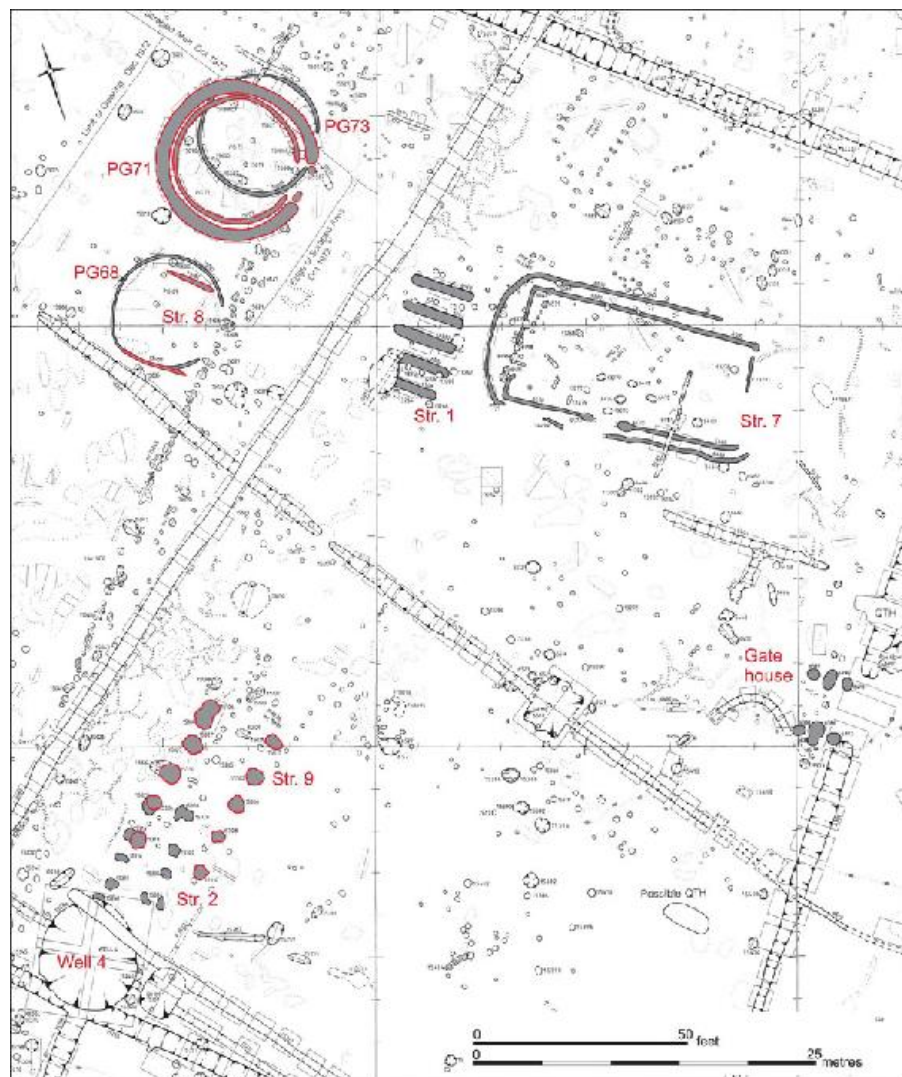


Figure 2.7. Base-plan of Central Enclosure structures (Nos. 1, 2, 7–9 and PGs 68, 71 & 73) and Well 4.

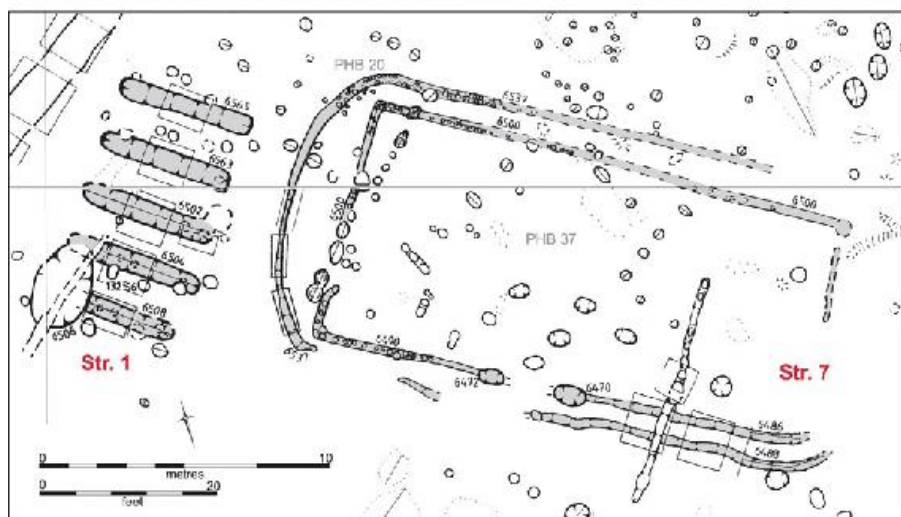


Figure 2.8. Plans of Structures 1 and 7 (bottom) and, above, photograph of Structure 1.

Excavated to a depth of 11m (and augered to a total depth of 15.25m, with its bottom not reached), a sub-rectangular shaft c. 6.7m deep was exposed. A distinct upper weathering cone, c. 8m across, suggested that the well may have been re-cut or subsequently used as a hollow (possibly a pond) prior to its utilisation as a dump-site. This later use appears to have truncated one of the inferred timber uprights of an earlier aisled building (Structure 2). The original excavated shaft and timber well appears to have been backfilled or silted (Fill K) to a depth of c. 4.9m when the well was recut (Fills G3 & G4). A third re-cut or cleaning out episode is observable in section (Fills F, G–G2 & M), c. 3m deep. A layer of charcoal (Fill E), above which was

deposited the majority of finds distributed throughout five fills (A–D & Z; the uppermost fill included sherds of Anglo-Saxon pottery), possibly represents a tip-line of burnt timbers/ash from a nearby building. Further bands of charcoal were also clearly visible in plan. Timber preservation was encountered at a depth of c. 7m. Wood stains were observed just above this and a minimum of 31 timbers (primarily oak) and 37 iron nails were recovered or recorded from the lower part of the shaft. The well construction technique consisted of an shaft, c. 1.5 × 1.5m, lined with planks c. 0.3m in length and 76mm thick, that were nailed to upright corner supports (c. 100mm sq.) creating a roughly square cross-sectioned shaft, approximately 0.9 × 0.9m to 1.2 × 1.2m; sand and gravels were packed and re-deposited behind the planking. Weathering and slumping distorted the shape of the well shaft, with some boards collapsing inwards, but the well's dimensions remained remarkably consistent to the point of its maximum excavated depth.

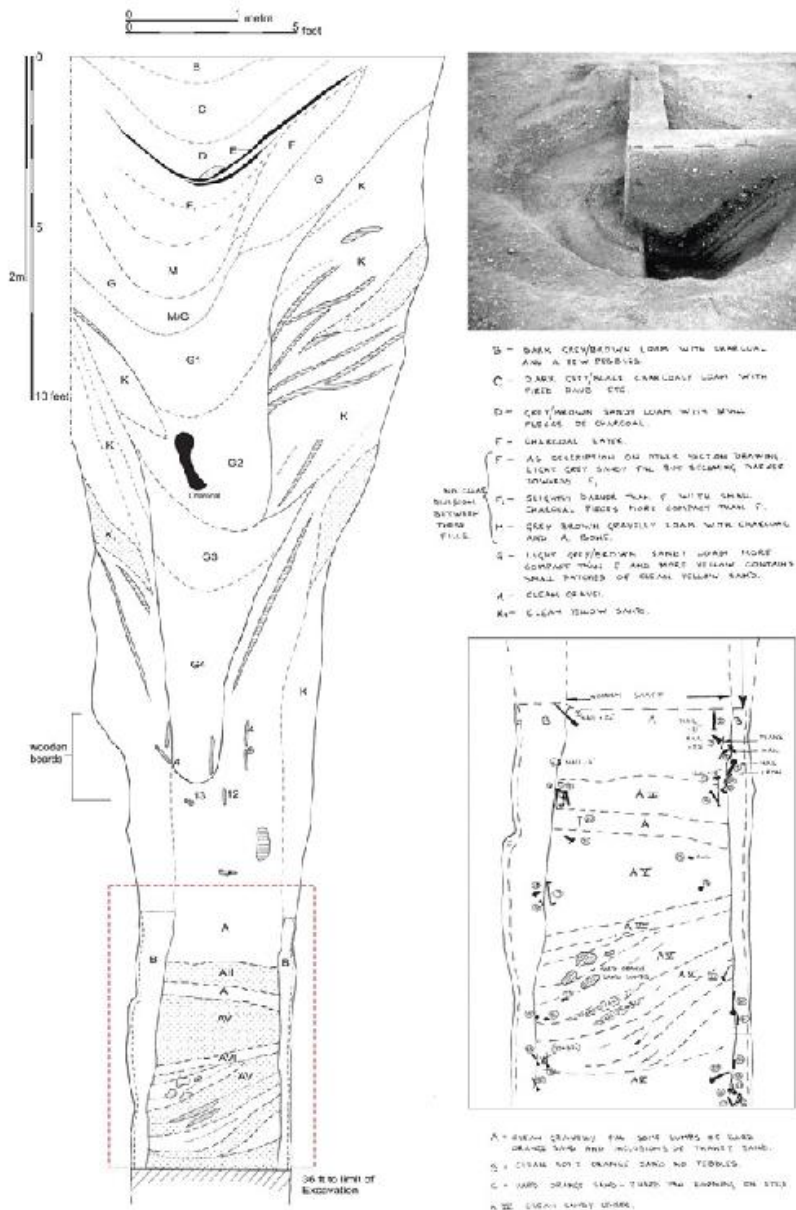


Figure 2.9. Section of Well 4 and photograph during excavation.

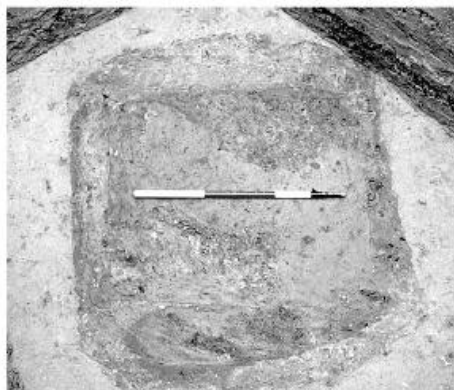


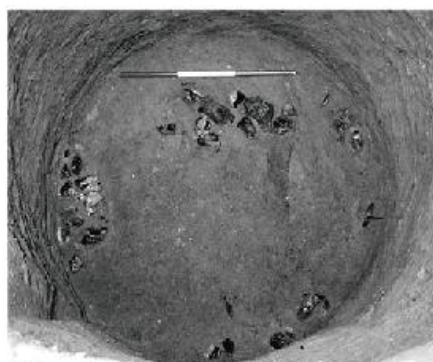
Figure 2.10. Plan and photographs of Well 4 under excavation, with detail of wooden tool and patterned daub.

Pottery deposition within the feature was mainly concentrated within the southeast quadrant of the upper fills to a depth of c. 2.4m. Dating primarily from the second century AD, the distribution of the non-samian sherds suggests that this had been tipped from the eastern side into the well's third recut. A larger dump of burnt later second-century samian, pottery and burnt daub (see below) was then tipped, again mainly from the eastern side, to a depth of c. 1.85m, above a distinct layer of charcoal. A similar depositional pattern is apparent in the metalwork. Interestingly, the fragments of possible strainers were apparently found below the layer of charcoal, at a depth of 3.0–3.6m. Although a small number of sherds of first- and first/second-century AD pottery were recovered (337) from between c. 2.6m to a depth of c. 7.6m from the well-shaft, pottery dating from the late second and third centuries was only found in the upper 2.6m of the well-shaft fills and the weathering cone. With the exception of waterlogged planks, uprights and nails, very few finds were retrieved from below a depth of 7m down to the point where excavation ceased, although a sherd of

later first-century pottery was retrieved from the external shaft and three sherds from within the timber shaft at 7.5m.

Of the vast quantity of burnt daub recovered from the well's upper fills, much it was decorated with lozengeshaped patterning and this material is further described in [Chapter Three](#).

All of the copper alloy objects were recovered from the upper fills. Personal items consisted of: hair-pins (No. 378) and/or needles (Nos. 332, 337 & 354), tweezers (No. 333), bangles and bracelets (Nos. 334, 343 & 376). A large openwork heart-shaped pendant (No. 365) was also recovered, in addition to a smaller teardrop-shaped plain pendant (No. 350) and possible mounts or pendant fragments (Nos. 380 & 382). A number of burnt and corroded vessels fragments, including rim fragments (Nos. 352 & 357) and perforated (No. 377), decorated or curved pieces (Nos. 328, 346, 371 & 386) were found; there is, though, insufficient data to assess the actual number and size of these vessels. Several objects were either from furniture or fittings, for example from doors, caskets or chests, and included domed studs (No. 360), rivets, riveted sheet/straps, hinges (Nos. 335, 355, 362, 369 & 419) and a decorated band (No. 406); a decorated cart finial was also present (No. 405). The remaining items of copper alloy objects (largely thin pieces of sheet) were too fragmentary, melted or corroded for identification (Nos. 327, 329, 331, 336, 338–9, 340–2, 344–5, 347, 349, 351, 353, 356, 358–9, 363–4, 366–8, 370, 372–5, 381 & 383–5); some also probably appear to be non-diagnostic tools (Nos. 361 & 379).



Photograph of well excavated to 29 feet depth

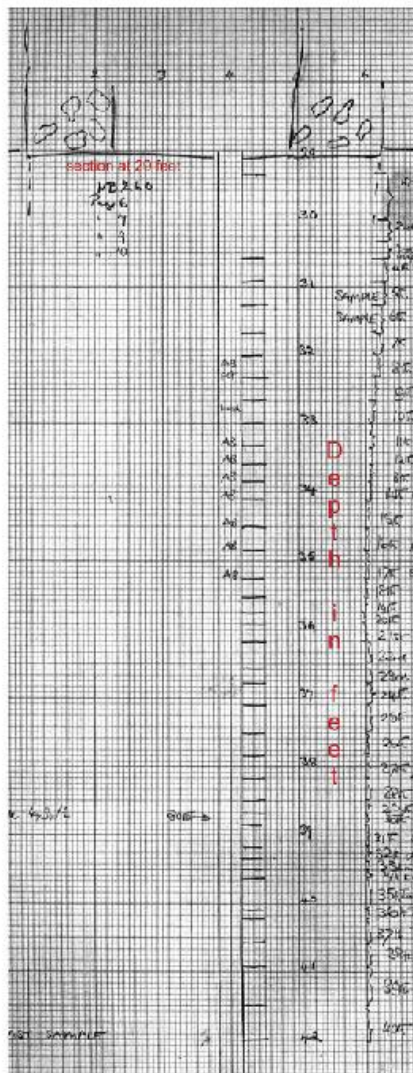


Figure 2.11. Photographs of the lower fills in Well 6, and details of the coring below 29 feet.

The size, depth and construction technique used for sinking Well 4 represents a huge labour investment and certainly indicates permanency of occupation. While its full depth was not determined – despite augering to 15m below the exposed surface – this highlights the difficulty of ensuring a secure supply of freshwater at this elevation (Wells 1, 2, 3 & 5 do not exceed 3m in depth, but these are located closer to the junction of gravel and brickearth). The well was

constructed of sawn or split planks nailed to squared-off corner uprights. It is presumed that its timber-lining extended to the well-head, with preservation at the lower levels due to mineralisation of timbers ('wood stains') and waterlogging; the wetness of the deeper fills was clearly recorded in the notebooks, as well as on the plans and section drawings. Dating the construction of the well is problematic due to the limited number of diagnostic sherds retrieved from the lower fills, but a mid to late first-century date is likely. The construction technique of the timber-frame and lining is certainly indicative of an early date.

The well appears to have silted during the second century AD, reducing it to c. 7.6m from its initial construction depth. Whether this represents an earlier abandonment of the well is unclear, but it must have remained a substantial hollow. Knowledge of its use as a well remained current; although there was no obvious deliberate backfilling at this level, the clay lenses provide evidence of water percolating through the natural and potentially into the well, with a distinct weathering cone present and collapse observed between 4.6m and 5.5m, corresponding in depth with the third recut/ cleaning. The later re-cuttings or cleanings may thus reflect rising water levels during the second century AD requiring repair and clearing out of the well. Of note is the vast quantity of pottery, daub and metalwork retrieved from it. The material was very concentrated, with much of it highly burnt and coinciding with a distinct band of charcoal c. 40mm thick (see [Chap. 3](#), [Fig. 3.38](#)). This deposit is indicative of utilisation of the hollow/disused well as a convenient pit. Certainly, the large quantity of burnt samian, metalwork (some clearly melted) and fired daub indicates the *en masse* clearance of a building destroyed by fire.

Well 6 – This was located in brickearth and within a lower area of ground in the southeast corner of the Central Enclosure, approximately 3m from the enclosure ditch and close to a possible entrance ([Fig. 2.11](#)). Circular in plan, this was c. 4.5m in diameter and was excavated to a depth of 8.9m; it was bored below this depth to a maximum depth of 13.1m. Having a minimum of 21 fills, the well possessed a sub-rectangular cross-section from a depth of c. 4.3m, with roughly uniform fills forming a clear rectangular profile to the base, which was c. 0.9m wide. Traces of a timber frame were encountered at the interface of these central fills with cleaner 'external' fills (disturbed natural); there was evidence that cobbles had been set around the outside of the frame, possibly to pack the space between the timberframe and the well's cut (this was more clearly evident at the base of the well where a layer of cobbles was found packed around more substantial traces of the frame). The almost total

lack of surviving timber from Well 6 makes detailing the construction techniques of its lining difficult; however, 19 nail fragments were recovered from the upper fills, several from between the main fills and disturbed natural of the actual cut.

Weathering and silting of Well 6 is evident from the profile, with clear signs of slumping. The uniformity of the central fills suggest that weathering occurred over a considerable period of time, with pottery dating from the later first century AD recovered from 8.5m deep, and second-century wares above 8.1m. In addition, an episode of deliberate dumping, probably in the mid to later third century, is suggested by the mixed fills and large quantity of pottery (min. 1145 sherds and nine sherds of samian) recovered from the feature's upper 2m, some seemingly 'layered' as if tipped in; 11 fragments of mortaria were also retrieved. Weathering deposits (1.06m thick) of clayey rain-washed silt and clay, plus a thin band of charcoal, sealed these dumped fills. In addition to the pottery, 70 fragments of building material were retrieved (19 *tegulae*, six *tubulae*, six *imbrices* and 39 undiagnostic pieces), an unidentifiable coin, a needle, a knife fragment, a fragmentary brooch, four pieces of rotary quern (all from a depth greater than 6.7m) and 141 identifiable fragments of bone. Curiously, 27 elements were identified as *Canis*, the majority of which (15 elements) were recovered from the deeper levels of the well (below 7m). Remains of hobnailed footwear were also recovered from deeper levels.

The Western Enclosures

To the immediate west of the Central Enclosure lay what had been a settlement core during the preceding later Iron Age phase – the so-named 'Belgic Banjo' – where activity and settlement clearly continued into the later decades of the first century AD ([Fig. 2.12](#)). As outlined in [Chapter One](#), all of its main components were of pre-Roman date and the only newly established enclosures were minor (B6, B31, B36 & B38/39₅). Aside from a series of gully-set granaries (PGs 56, 58 & 78) and a possible small shrine (PG 75/76), several of the early kilns were scattered through this complex (and the upper fills of the

former ditches of the later Iron Age settlement contained large amounts of their waste products). This area appears to have seen intensive pottery production in the later first century AD.

The Enclosures

The complicated development of this extraordinary later Iron Age enclosure complex – as well as the many ambiguities that dog its interpretation – are discussed at length within the Prehistory Volume's [Chapter Four](#) and will not be repeated here. Eventually its main compounds (all eastward opening) consisted of a quasi-concentric halfcircle (B1/7/8) with a rectangle appended to its southern side (B5; [Fig. 2.12](#)). With the exception of Kiln 6 that lay somewhat further to the east, all of the area's kilns were dotted throughout the axes of these former enclosures (marked by remnant earthworks), and in some cases cut their upper ditch. Of the associated buildings, whereas PG56 and PG58 both lay just exterior to B5's rectangle, PG75/76 and PG78 were located just inside B7's line. Cemetery V's inhumations clearly occurred exterior to the latter's earthwork form, although probably had their origins in the Late Iron Age.

Otherwise, only a series of minor enclosure-compounds were newly established. Enclosure B6, nearly square in shape (19.80 × 18.3m), had an entrance 4.5m across to the south, with a probable gateway structure (comprised of posthole/gully alignments MC5510 & MC5512). The enclosure ditch was 1.68m wide and up to 0.46m deep (Fig. 2.13). Contemporary internal features were few, but included a small number of pits, and a gully feature with internal stakeholes (MC5427) running close by, and parallel with a stretch of the eastern side of the enclosure. The ditch produced nearly 2000 sherds of first- and early second-century AD pottery, with deposition suggesting a sequence of infilling from the later first century onwards; two coin finds support this dating (Nos. 66/76 & 66/128).

Enclosure B36 lay to the south of Enclosure B5. Some 19m by 14.5m, it too was rectilinear, with a wide entrance at the east (there was truncation at the northwest corner by a post-Medieval ditch, and part of this area remained unexcavated). The ditch was up to 1.14m wide and 0.58m deep; contemporary internal features comprised a small number of pits, but no identifiable structures (its internal roundhouse, PG/RH47, was of Middle Iron Age date and its position coincidental). Nearly a thousand sherds were found within the fills of this enclosure, and their dates suggest that the enclosure remained in use until the end of the first century AD.

Enclosure B38/B39 had a discontinuous ditch with a western entrance, but remained open-sided to the east. Rectilinear in shape, it spanned 22m by 11m; the ditch was up to 1.2m wide and 0.38m deep. Its large pottery assemblage (1718 sherds) was largely later first-century in date. Internally, there were a number of undated post- and stake-holes that could be structural.

Extending over c. 300sqm, Enclosure B31 was of ovoid plan as defined by a minor ditch, 0.5–0.8m wide, and was dated by its assemblage of 121 sherds of later first to earlier second-century date. Interestingly, the ditch seems to have directly conjoined and been continuous with the eavesgully of a roundhouse set south-centrally within it – PG65 – with the enclosure's c. 1.0m-wide entrance corresponding with that of the building.

Structures

With the area's Structure 6 – the Joneses' 'Belgic House' (see Prehistory Vol. figs. 4.22, 4.66–7) – assigned to the Late Iron Age, only PG65's round structure could potentially have had a residential function (although its paucity of finds would not suggest this). The gullies of PGs 56, 58 and 78 must have directly related to the four-

posters within their interiors and been large round-roofed raised granaries; equally, the very small PG75/76 circle-in-rectangle setting could not have been a house and a minor shrine function is proposed for it below. Given the vast number of unattributed postholes and short gully lengths in the area, other structures may well have gone unnoticed (see Prehistory Vol., chap. 5, fig. 5.37). Having said that, the absence of any obvious residential capacity might be expected of an area that evidently saw only seasonal or temporary industrial activity.

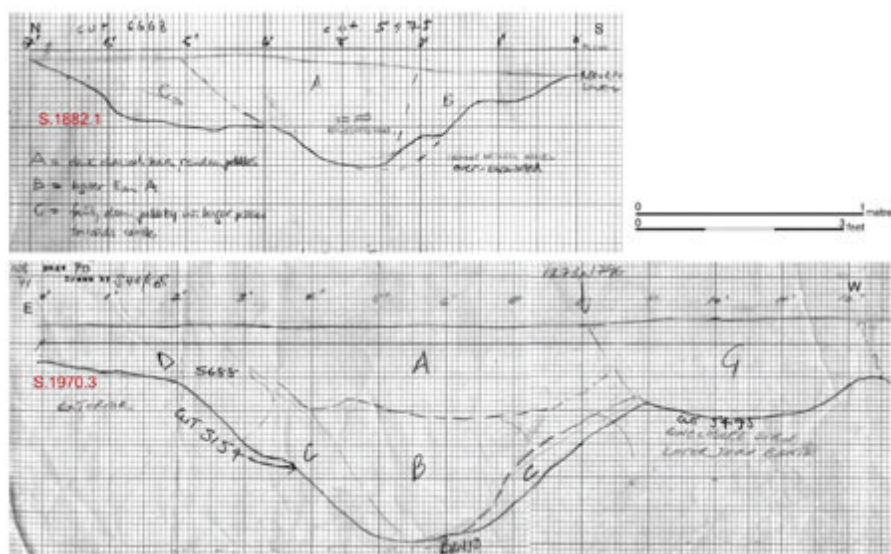


Figure 2.13. Western Enclosures: selected ditch sections.

PG56 (with Four-poster 27; 1070N/117E) – This consisted of a penannular gully (Context 5022), 0.64m to 0.78m wide, with an internal diameter of 3.17m; it enclosed an area of c. 8sqm (Fig. 2.14). The structure had a southeasteriented entrance, c. 0.9m across. Postholes within the gully’s interior denote a square four-post structure (1.65 × 1.67m), with a ground plan of 2.74sqm; several postholes had been replaced, with two features consisting of two or more smaller postholes grouped together. Two sherds of mid to later first-century pottery were recovered from one of the postholes, but no other dating evidence was present. The postholes were between 0.25m and 0.6m in diameter and 0.18–0.43m deep.

PG58 (with Four-poster 28; 1093N/116E) – Located immediately to the north of Structure PG56 (Fig. 2.14), this was of identical construction with a penannular gully, 0.85– 1.0m wide and 0.15–0.3m

deep, with an internal diameter of 3.7m and floor-area of c. 10sqm; an entrance, 0.9m wide, was oriented to the southeast. Internally, several features (including postholes 5028, 5030, 5032 & 5034) denoted structural elements, possibly a four-poster structure ($1.75 \times 2.3\text{m}$) with an area of c. 4sqm. One assigned posthole feature (5028) consisted of four smaller postholes aligned in an arc, 1.55m long, along the inside edge of the penannular gully; these appear not to have been replacement postholes. The postholes were 0.58–0.63m wide and 0.56–0.98m long (excluding 5028, whose four postholes were each c. 0.25m in diam.), their depths varied between 0.15m and 0.38m. Six sherds of Colchester buff ware fabric were recovered from the gully, and three sherds of later first-century AD pottery from one of the postholes (further ‘coarse IA/RB’ sherds are recorded in the notebook: NB 122.15–27). A later cremation (No. 536; described as Romano-British, but with no further details recorded other than the presence of pottery and cremated adult bone) was inserted into the gully’s southern arc.

PG65 (with Four-poster 39; 1163N/312E) – Located within a small oval enclosure (B31), the building’s gully was 0.38m wide, 0.15–0.25m deep, c. 7.16m in diameter, and enclosed an area of c. 42.5sqm (Fig. 2.15). A small gully (12421), 2m long, 0.36m wide and 0.15m deep, may have been part of this structure and suggests that the entrance, situated towards the east, may have been provided with a short screen or wall-section and double doorway. Situated within the structure was an alignment of three small postholes, 0.22–0.3m in diameter and 0.1–0.12m deep. Four postholes suggest a ‘coherent’ setting. The northernmost (0.5m across and 0.33m deep) was identified during excavation as a central posthole, with the two southernmost features (including 12423) identified as hearths due to their shallowness (0.23m deep) and lenses of charcoal; however, the group’s remaining feature of this group was 0.46m wide and 0.38m deep, and suggests that these were all structural elements, possibly a four-poster (FP39; c. $1.5 \times 1.5\text{m}$); lying off-centre to PG65’s circle, it probably predated the roundhouse itself. Little dating evidence was recovered. The enclosure, though, cut a later Iron Age feature, and was itself cut by a pit containing a substantial deposit of mid to late first-century pottery. Other later first-century pits and postholes occurred within the enclosure but, located exterior to the penannular gully, these may represent further structures.

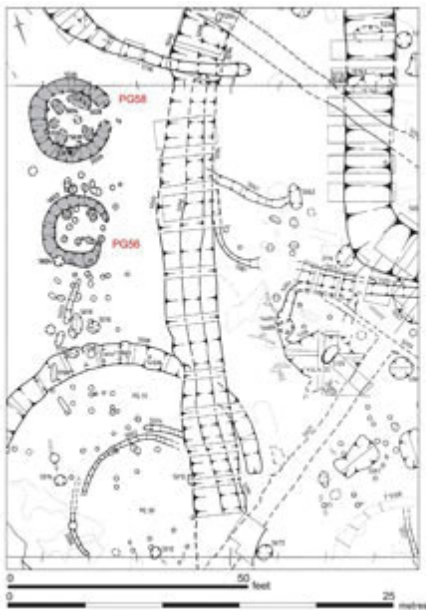


Figure 2.14. Base-plan and photographs of PGs 56 and 58.



Figure 2.15. Base-plans of PGs 65, 75/76 and 78.

PG75/76 (1245N/147E) – Although classified as a penannular gully

building, PG75 consisted of a rectangular eavesdrip gully (5668, re-cuts 5664 & 5666), c. 0.3m to 0.6m wide, which spanned 4m by 4.6m, enclosing an area of 18sqm (Fig. 2.15). Cutting the lower Banjo ditch (B1; 5154), the gully had been re-cut at least once, with depths at the southern terminals increasing from 0.07m to 0.28m; the entrance was 1.16m across and oriented southeast. A number of (uncatalogued) Late Iron Age/Early Roman pottery sherds were apparently recovered during excavation of the gully, with higher densities of finds recovered from the terminals (see NB 144.54–72 for details and sketches).

Located immediately above and within the PG75 gully, and partially cutting it, was a penannular gully 0.25–0.3m wide and 3.3m in diameter, which enclosed an area of 8.9sqm. This, PG76, appears to possibly be a smaller replacement structure for PG75, with its entrance (0.82m wide) also oriented to the southeast. At the northern terminal was a small posthole, and five postholes lay along the lower arc of the gully. These may represent structural elements of PG76; they were 0.38–0.61m deep and 0.22–0.4m in diameter.

PG78 (1302N × 166E) – This was represented by a partially truncated penannular gully with an estimated diameter of 4.3m (Fig. 2.15). Between 0.25 and 0.7m wide, and c. 0.2m deep, the gully was very shallow with a concave base, and had mid brown sandy to pebbly silt. Four distinct postholes formed an internal square structure and had each been re-cut. The setting showed morphological similarities to PG56 and PG58; therefore, while the structure was undated as such, it is thought to have been broadly contemporary with them.

The Kilns Rosemary Jefferies

Aside from those kilns associated with Phase 2 (1–6), 17 small kilns – previously termed ‘Belgo-Roman’ or ‘Protokilns’ (Jones & Rodwell 1973, 13, 18) – were recognised at Mucking. These seem to divide into two main groups: those in the southern part of the Roman system (Nos. 7–16), and a group in the Western Enclosures (Nos. 17–23; see Fig. 2.12 for location). Firebar fragments appear to be common in the fills of both, but were less frequent in those within the western group. These early kilns show diversity in construction and size, which is hardly surprising as they represent very localised production.

The kiln furniture can be seen to differ. Kilns 7–10 contained mainly pieces of Type A1 firebars, while the oval kilns contained a greater variety of types of firebar, clay briquettes and plates (this including Kilns 14 & 16 in the southern group, and most of those in the Western Enclosures’ area). None of this kiln furniture was found *in situ*, but

only as fragments discarded into disused kilns. The types of kiln furniture are discussed below. It is of note that no pedestals were found in the smaller kilns; either the firebars had spanned the walls from side to side (although there were few complete examples to prove if this could be so) or a temporary pedestal, such as an inverted pot (*cf.* Swan 1984, fig. III.1), could have been used. Kilns 17–23 are reported on here, and 7–16 in the following section.

Kiln 17 (739N/142E; Archive Refs: Plans 1078–9, Section 1080; NBs 41.118–20; 63.10) – This was excavated during August 1968 under salvage conditions and the record is not good. The kiln appears to have been dug partly into the sandy clay fill of an east–west oriented Iron Age ditch, cut into the sand and gravel subsoil. The kiln was oriented north–south, with the flue on the south side ([Fig. 2.16](#)).

The chamber was clay-lined, and appears to have been rectangular rather than oval in shape. The walls were hard fired and oxidised to a depth of c. 0.05m. Beyond this, the raw clay varied in depth from 0.05m at the north end to 0.25m at the other side of the flue. There was no fired clay *in situ* on the chamber floor. Low down in the chamber, intense heat had reddened the chamber close to the floor, and it is possible that the heat had destroyed the chamber floor if it had been thinly lined with clay. In section the chamber walls were near vertical-sided, and the chamber was approximately 0.46m deep. The flue was at the south end of the kiln and, although little of it was left, sufficient survived to see that it was quite short, c. 0.13m in length, and only 0.08m wide at the junction with the chamber, broadening to c. 0.13m at the mouth.

At the junction of the flue and the chamber a vertical pillar had been placed halfway across the chamber entrance, and a horizontal strip of clay had been laid across the chamber, thus forming two arches at the junction of the kiln chamber. The strip had been pierced through above each arch. The arches were approximately 0.36m high. These features are difficult to interpret and no close parallels are known. Such an arrangement may have helped to deflect heat and assist with air circulation within the chamber. The site plan shows a roughly oval area (c. 0.38 × 0.36m) at the mouth of the flue, described as containing a dark clay fill and some loam. It is too small to permit someone to stand in it (and for it, therefore, to be a stoke-pit), and it is thus interpreted more properly as a fire pit in which a fire could be constructed and fed from ground level. A single firebar was recovered. Very little pottery was present, either from the kiln or from the nearby ditch, but that which was present was mid to late first-century in date, and comprised small fragments of oxidised and flaked kiln wasters.

Dimensions:	Max length	Max width	Max depth
Construction pit	1.32m	0.94m	>0.23m
Stoke-pit	0.38m	0.36m	0.23m
Flue	<0.13m	0.08–0.13m	?0.36m
Chamber	0.74m (int.)	0.48m	0.46m

Kiln 18 (1001N/235E; Archive Refs: Plan 912; NB 128.3–12) – This was excavated in haste, like Kiln 17, in advance of the quarry belt being moved. The complex is interpreted as having two phases; Phase I, which was orientated approximately NW/SE, and Phase II, oriented east–west and which partly destroyed the primary structure. The adjacent pit was considered to be an extra large stoke-pit for the Phase II kiln ([Fig. 2.16](#)).

Phase I – This was oriented northwest–southeast, with the stoke-pit to the northwest. However, much of the kiln was destroyed by the construction of the Phase II kiln. The southeast section of the chamber remained, with fired clay grading through to raw clay *in situ*. The chamber appears to have been of oval plan. A small section of the stoke-pit remained to the northwest of the chamber; this had also been cut through by the Phase II kiln.



Kiln 17



Kiln 18



Kiln 22



Kiln 23

Figure 2.16. Photographs of smaller kilns (Nos. 17, 18, 22 & 23).

Dimensions:	Max length	Max width	Max depth
Construction pit	c. 1.68m	1.98m)	>0.3m
Stoke-pit	>0.3m	0.48m	-
Flue	-	-	-
Chamber	>0.61m	0.46m	>3cm

Phase II – The construction pit for the Phase II kiln was oriented approximately east-west, across the flue, stoke-pit, and part of the chamber of the Phase I kiln. The chamber was oval, about half of the wall being preserved, with a fired clay lining at the back of the chamber. The lining, approximately 0.04m thick, was of oxidised clay merging to raw clay. It was noted that the northwest chamber wall was constructed of clean raw clay laid directly against the natural gravel, and that there was no indication of reddening. There are two possible interpretations: i) that this was the raw clay backing of the oxidised kiln wall, which had itself shelled off leaving only the raw clay backing, or ii) that the chamber wall had been partly repaired here, but that the kiln was abandoned before it was refired. It should be noted that the fill of the kiln chamber, above a layer of firebar and pottery fragments, comprised raw clay. It is possible that this had been brought to the site for a relining or to repair it, but that the kiln was abandoned before the repair could take place. The walls of the chamber sloped outwards from c. 0.7m at the level of its floor to a width of c. 0.9m at the maximum height of the chamber, some 0.45m above the floor.

The kiln's flue was fairly wide, 0.41m at the junction of the chamber, which tapered over its 0.46m-length to c. 0.3m at the stoke-pit. While the original height of the flue walls cannot be estimated, the base of the flue was at a higher level than the chamber floor. The flue fill contained a copper alloy Colchester derivative brooch of the mid to later first century AD (see Haselgrove, Prehistory Vol., Brooch no. 33), and burnt bone. The stoke-pit was large, measuring over 1.5m by 1.2m. Just outside the flue mouth was an intense spread of fired clay fragments and charcoal, presumably spent fuel ash. Associated pottery was consistently of mid to later first-century AD.

Dimensions:	Max length	Max width	Max depth
Construction pit	2.29m	1.37m	0.46m
Stoke-pit	1.02m	1.37m	-
Flue	0.46m	0.38m	-
Chamber	0.76m	0.75m	0.45m

Kiln Furniture – All the identifiable kiln furniture came from the Phase II chamber fill. This comprised a complete firebar, two end pieces and a fragment. There was also a fragment of flat, perforated fired clay, which may have been part of a fired kiln floor. The complete bar (No. 40) was 150mm long, had a maximum width of 65mm and weighed 1078g. If complete, this would have spanned less than a quarter of the chamber. It may have been used in conjunction with the perforated kiln floor. Of some interest was a cylindrical fired clay fragment (No. 29). This had a diameter of c. 305mm and weighed 2725g. It is possible that this object was a pedestal or firebar support, as its size and shape would have made it most unwieldy as a horizontal firebar. At one end of the bar there is a pre-firing hole or perforation. Two further fragments are worth noting – Numbers 41–2 – the end pieces of square/rectangular-sectioned bars, measuring 70mm and 75mm square.

Kiln 19 (1113N/144E; pub. ref.: Swan 1984, MF 297, right; Archive Refs: Section/Plan 1732, 1736–7; NB 189.29, 33–46, 191.14–15, 21–4) – This structure was excavated in December 1971, and was dug in layers rather than by spits. The kiln was constructed within the fill of ditch B5. Both the kiln and ditch were oriented northeast to southwest, and both were cut by a post-Medieval ditch, with the kiln being badly damaged. It comprised an oval chamber, c. 1.22m long, nearly 0.61m wide and approximately 1.83m deep. The structure was first recorded at a depth of c. 0.46m in the upper fill of the ditch. No trace was noted of either a flue or a stoke-pit, but if these were at a higher level than the kiln chamber (as in the case of Kiln 20) they would have been destroyed by the post-Medieval ditch. Tentative evidence of this may be seen in the section, which shows the gentle slope of the kiln wall at the NNW end of the chamber wall, as in Kiln 20.

Much collapsed clay walling was found in the chamber, along with raw clay. The chamber wall was described as very friable, and that it crumbled when an attempt was made to lift it, but there is no clear record of whether the chamber wall remained *in situ*. Later first-century AD pottery was recovered.

Dimensions:	Max length	Max width	Max depth
Construction pit	1.27m	>0.6m	>0.15m
Stoke-pit	-	-	-
Flue	-	-	-
Chamber	1.27m	>0.6m	>0.15m

Kiln Furniture – Five firebar fragments were recorded from inside the chamber. None were *in situ*, and they appear to have been discarded into the debris of the kiln when it was abandoned. All of the identifiable fragments were of square section, and three joined to make a complete bar 590mm in length, with a maximum width of 56mm (1833g). Although the maximum width of the kiln chamber was 560mm, this was without the clay lining, which was c. 25mm thick. The maximum width of the chamber would thus have been c. 500mm, narrow enough to allow the firebar to span it.

Kiln 20 (1042N/172E; Archive Refs: Plans/Sections 931–2; NB 94.21–35, 110.78–83, 125.76, 126.43) – The kiln was excavated in July and August 1969. The immediate area had been subjected to severe disturbance from burrowing rabbits, and the kiln itself had been cut by a modern feature. When first uncovered, the kiln was thought to be the butt end of a ditch, and a section was, therefore, cut across it at rightangles. It was excavated in three-inch spits, with the kiln not recognised for what it was until Spit 6, at 0.46m depth.

The kiln was oval, oriented NNW/SSE, with a stokepit, but no obvious flue. The chamber walls were oxidised, grading through various shades to a yellow plastic clay backing. The floor was not clay-lined, instead being marked by a level of charcoal, presumably fuel ash. In section the chamber walls sloped outwards from c. 0.61m wide at the floor level, to c. 0.81m at their maximum surviving height (c. 0.15m) at the chamber's eastern end. At the latter's NNW end, the surviving walling was c. 0.46m in depth. There was an opening, c. 0.15m wide, giving onto the stoke-pit at the SSE end of the chamber, but there was no kiln flue. The stoke-pit floor was at a higher level than the chamber. Only one firebar fragment was recorded (No. 43), 150mm long and weighing 164g. Pottery from the kiln was largely later first- to early second-century AD in date.

Dimensions:	Max length	Max width	Max depth
Construction pit	0.91m	0.86m	c. 0.51m
Stoke-pit	-	0.61m	0.28m
Flue	-	-	-
Chamber	1.47m	0.74m	0.46m

Kiln 21 (1145N/151E; Archive Refs: Plan 1802.2; NB 171.46–9, 176.5–7, 26–37) – This had been inserted into the fill of the recut ditch B1. The records do not show any part of the kiln structure *in situ*, but noted a concentration of raw and fired clay in an elongated oval, approximately 1.07m long and 0.46m wide. It appears to have been aligned approximately north–south. ‘Belgic bricks’ were recorded from the area near the kiln, as was a perforated clay fragment that may have been part of an oven plate. No kiln furniture was recorded, and all associated pottery was mid to later first-century AD.

Kiln 22 (1155N/195E; pub. ref.: Jones & Rodwell 1973, fig. 3, 18–19; Swan 1984, MF 298 left – this reference cites two kilns, but there is only one at this location; Archive Refs: Plan/Section 2951; NB 180.27–57) – This had been constructed partly over a Beaker burial (Grave 786). The kiln, which was oriented east–west, consisted of an elongated clay-floored oval chamber with a semi-circular area at either end (Fig. 2.16). Its floor had apparently been covered with yellow clay, which had mostly been fired to a dense black, but remained unaffected by heat at the edges. Into it were impressed small fragments of flaked, ill-fired pottery. The eastern end of these two areas is interpreted as a stoke-pit, although no flue separated it from the chamber itself. Three firebars were arranged to form an arch at the junction of the chamber and the stoke-pit (the two uprights showing extreme reddening). The semi-circular area at the western end of the structure was clay-lined, and had been incorporated into the main chamber itself. There are two likely explanations for the form of the structure:

- 1) Kiln 22 had two phases: in the first there was a stoke-pit at the western end of the kiln, which had an elongated chamber comparable in general terms to Kilns 7–9. In its secondary phase, the kiln chamber was enlarged by lining the stoke-pit and incorporating it into the chamber. A new stoke-pit was then constructed at the opposite end of the chamber.
- 2) In its primary form, the kiln had two opposing flues (possibly in a similar arrangement to Kiln 15), but in its secondary phase is as in (1) above.

Either explanation could be correct, but the records lack sufficient detail to enable a definite interpretation. This kiln is very difficult to interpret, and has been published as a prototype kiln (Jones & Rodwell 1973), and described as having a clear division of the furnace, tiny flue and stokepit. However, considering the overall structure of the kiln, this appears to be an over-simplification, overlooking the semi-circular area at its end. Kiln 22 contained a complete firebar 41cm long (1710g), six end pieces (with both tapered and square/rectangular ends) and five firebar fragments. The associated pottery was later first to earlier second-century in date.

Scheme I (Phase I)

Dimensions:	Max length	Max width	Max depth
Construction pit	1.52m	0.46m	-
Stoke-pit	0.46m	0.46m	-
Flue	n/a	n/a	n/a
Chamber	1.07m	0.46m	-

Scheme I (Phase II)

Dimensions:	Max length	Max width	Max depth
Construction pit	2.13m	c. 0.56m	-
Stoke-pit	0.76m	c. 0.56m	-
Flue	n/a	n/a	n/a
Chamber	1.37m	0.61m	-

Scheme II (Phase I; Phase II as Scheme I above)

Dimensions:	Max length	Max width	Max depth
Construction pit	2.13m	-	-
Stoke-pit	0.41m; 0.76m	-	-
Flue	-	-	-
Chamber	0.91m	-	-

Kiln 23 (1225N/165E; published references: Swan 1984, F 298 centre; Archive Refs: Plan/Section 1906–8; NB 180.19–20, 23–7) – Excavated in September 1971, this had been built into the bottom of a ditch

(B15) that appeared to have been widened to accommodate the kiln (Fig. 2.16). The kiln was roughly oval and aligned with the ditch. There was a concentration of charcoal at the kiln's SSE end, which would appear to represent the stoke-pit. The chamber was 1.12m long and 0.46m wide. Its walls were preserved on either side, but there was no wall at either end. In the SSE this is, of course, explained by the presence of a stoke-pit. However, the excavator suggested that there could have been two opposing stoke-pits, thus explaining the absence of a kiln wall at the chamber's NNW end. The section drawing supports this suggestion, although there is insufficient evidence to be certain. The chamber walls had been fired hard and reduced, grading through to plastic clay. Its floor did not appear to have been claylined. There was no evidence of a flue at either end of the chamber, although at the eastern end of the chamber three firebars formed an arch, suggesting some sort of flue that had been destroyed.

Fifteen firebar fragments were recovered from the chamber and two from the baulk. There was a complete firebar, which had what appeared to be animal paw prints along one side. This was 475mm long, just long enough to span the kiln chamber. In total, there were a minimum of 11 firebars present, though it would seem unlikely that any were *in situ* from the information available. Belgic bricks and a possible perforated oven floor were recorded from ditch B15 nearby, which may possibly have been associated with the kiln. Associated pottery was mid to later first- to early second-century AD in date.

Kiln 23 dimensions:	Max length	Min length	Max width	Max depth
Construction pit	1.87m	-	0.76m	-
Stoke-pit?	0.46m	0.3m	-	-
Flue?			0.46m	
Chamber?	1.07m	-	0.46m	0.3m

The Southern Enclosures

To the south of the Central Enclosure, a series of enclosures were laid out; as related above, though, some might be of immediate Conquest Period date (Fig. 2.17). These were oriented in relation to the central 'spine' of the site, as represented by the western ditch of the Central Enclosure that extended further southwest, to form the western side also of the southern enclosures. The southern enclosures can be

divided into three distinct areas: a northern part that saw division of the area into a series of small sub-enclosures; this area contained Kilns 11–14 and 16. To the south, a western part contained Kilns 1, 10 and 15. These all lay within a large and apparently undivided enclosure (except on its western side) that strongly referenced the later Iron Age enclosure RBI in its layout. To judge from pottery in the middle to upper fills of RBI, this had remained a substantial ditched feature into Phase 1. It is notable that the three kilns here were all constructed into the top of its ditches; there may have been technological reasons for this. The actual Phase 1 enclosure in this area was, however, a new ditched enclosure, whose boundaries mirrored the layout of RBI, but lay externally to it. Finally, in the eastern part, another extensive rectilinear enclosure, RBII, was laid out, following the overall Phase 1 enclosure alignment. This enclosed Kilns 7–9, as well as two poorly-defined timber structures (Structures 3 & 5). A further structure, Number 4, lay centrally between the three main parts of the southern enclosures.

No wells in this area are actually attributed to this phase. While some of the larger pits indicated on the plan may have fulfilled this function, based on recovered dating evidence all seven of the designated wells within this area are assigned to Phase 2. This, of course, is a most unlikely situation. By the scale of the area's Roman activity in Phase 1, there must have been an available water-source and, therefore, it is only logical that the first sinking of at least some of the Phase 2 wells must have actually occurred during Phase 1.

The Enclosures

The main outer ditches for the northern part of the Southern Enclosures were F10/11, running northwest to southeast, and meeting F3, which continued the central 'spine' ditch from ditch A2N, with the eastern side bounded by ditch F14 (Fig. 2.17). No coherent southern boundary was visible. No entrances were visible through the northern boundaries, although there was one leading from the Western Enclosures into the apparently empty area that lay between the Central Enclosure and the Southern Enclosures (and which later became the focus for Anglo-Saxon Cemetery II). If entrances did not lie in unexcavated stretches of ditch F3, the main access to these enclosures was presumably from the east (and may indicate that this area was coming into use as the Western Enclosures were in decline). These external ditches displayed several re-cuts, but were generally up to 1.8m wide and 0.25–0.5m deep (Fig. 2.19). Internally, this area was divided up into a series of smaller enclosures by northeast–southwest-oriented ditches, F3B/C and F12/15, and by those at 90 degrees to them: F4/5, F6 in the western part, and by the continuance of F12/15 in the east. These internal ditches were up to 1.8m wide and 0.5m deep. Along with the kilns – Kiln 16 in the western sub-enclosure, Kiln 13 in the central, and Kilns 11–12 and 14 in the eastern – there were numerous undated and loosely dated postholes spread through this enclosure system, and the existence of unrecognised contemporary timber structures is likely. To the southwest, the RBI-related enclosure may also have been kiln-associated. Here, with the visible ditches of the partly-infilled RBI apparently used as a guide, a series of smaller ditches were dug to form a main rectangular enclosure with a western annexe (Figs. 2.17–9). The main enclosure ditches (D2A; 153/3686; hastily excavated in parts) were slighter than those of RBI (which was up to 5m across and 2m deep in places), measuring just 0.45–0.55m wide and 0.5m deep. No continuation of the ditch was visible on the northeastern side, and the extant ditch of RBI may have served as the boundary there. The western annexe, bounded by ditches D5 and D10 (which were of similar dimensions to the main enclosure ditches), was only partially excavated, but presumably had entrances to mirror those visible in the northwestern side of the main enclosure. The lack of internal excavation, particularly of the western half of the enclosure – the eastern half displaying a complex archaeological sequence as it overlay the Bronze Age South Rings and Middle Iron Age roundhouses – means that, aside from the kilns (which were dug into infilled sections of RBI), no structures were definitely associated with this phase. Again, though, the mass of undated postholes must surely attest, in part, to contemporary activity and occupation.

Immediately to the east lay the 'RBII' enclosure, which forms the

third part of the southern enclosure complex. Interpretation of this area is not easy. It saw much recutting of its main axes, as well as being the main focus of whatever activity there was on the site in the later Roman period (and 'primary' Anglo-Saxon period). As it lay at the edge of the site, it saw variable amounts of excavation, some of which took place under very pressured conditions. Nevertheless, examination of the pottery distributions strongly suggests that the main RBII enclosure ditch was laid out during Phase 1. This comprised a substantial and much recut northeast/southwest-oriented ditch (201) which passed just to the south of the Bronze Age enclosure before running southwest for some 100m and disappearing off the site at its extreme SE corner. To the north, a second ditch (1226) continued the alignment of 201 northwards, before turning sharply eastwards. The precise course of this feature is uncertain due to the salvage nature of excavation in this area and truncation by later features. The resultant enclosure would have served to enclose Phase 1 Kilns 7, 8 and 9; the tentative Structure 5 appears to stratigraphically belong to this phase, although little direct dating evidence was recovered from its many postholes. There may well have been other contemporary structures that remain unrecognised.

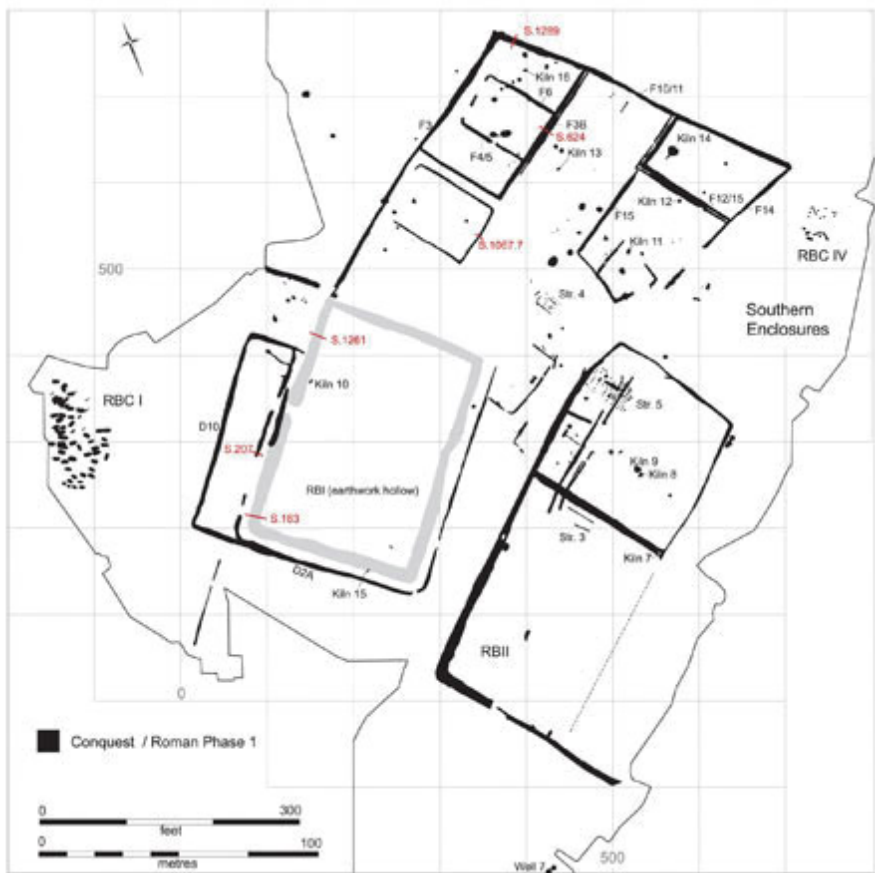


Figure 2.17. Southern Enclosures: Phase 1 plan with feature labels.

Structures

The area's building remains were poorly realised; as mentioned above, many of its unattributed postholes and gully lengths probably attest to more that went unidentified. Equally, the rather confused arrangement of Structure 5's components suggest the occurrence of more than one building there.

Structure 3 – Just to the south of, and parallel with a ditch (201) and its recut (654), are two small slots. The northern slot (680) is 10.7m long, and the southern slot (677) is shorter, at 5.8m; they are 0.2–0.43m wide (210N/460E; Fig. 2.20). They diverge slightly to the north. The structure is cut on its northern side by GH38, and the SE end of the structure was destroyed by the modern field ditch (1072). The north end of the structure was not fully explored, the area being partially obstructed by the position of the gravel conveyor in July 1968. While some pits (662, 664, 666) lie within the two slots, it is

not certain whether they are connected with the structure itself. The slots possibly represent the foundations of a shed-like structure.

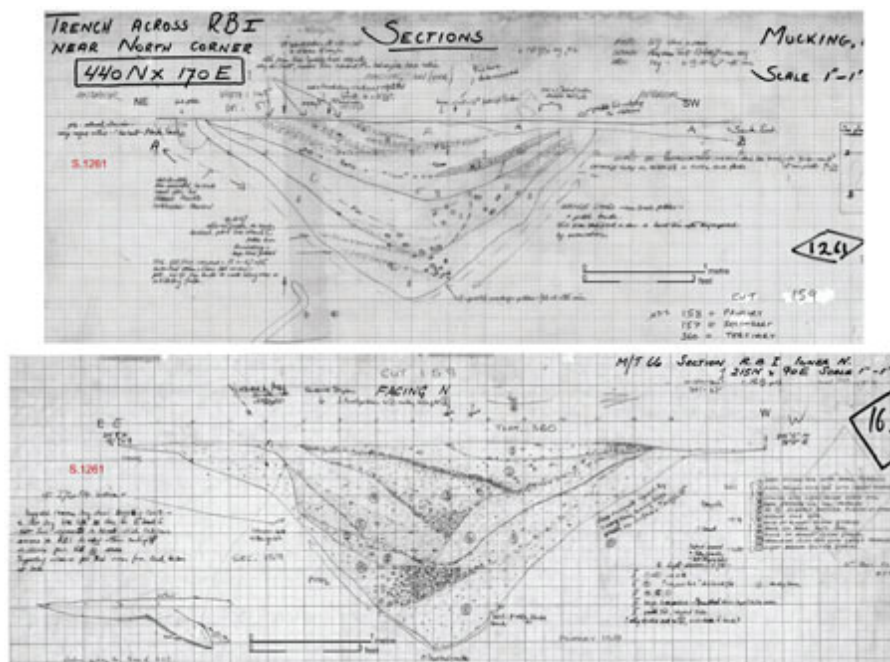


Figure 2.18. Southern Enclosures: selected ditch sections (I).

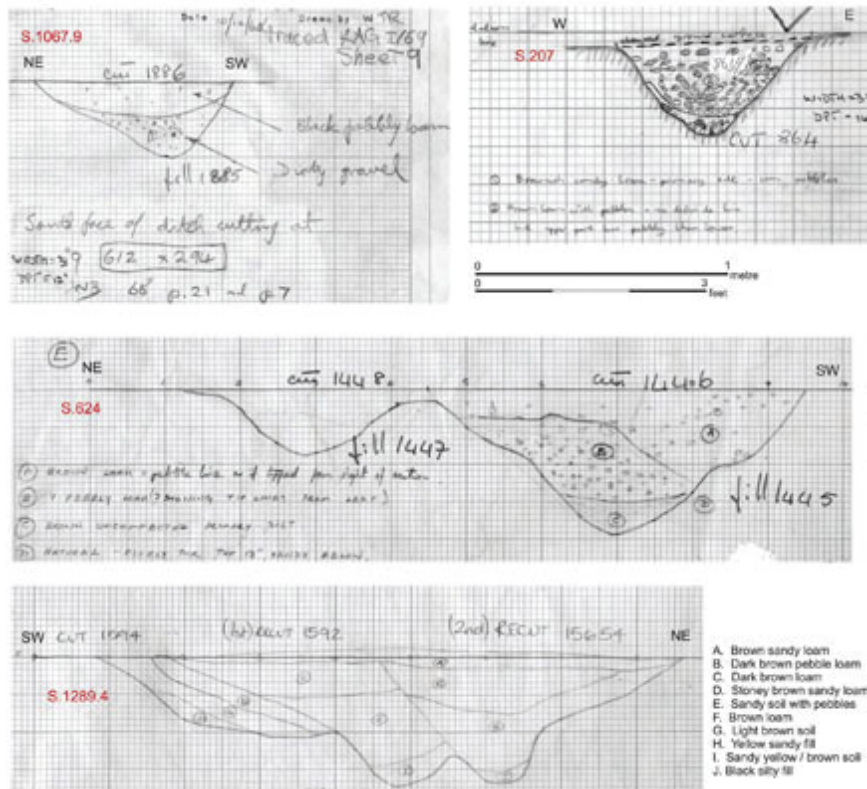


Figure 2.19. Southern Enclosures: selected ditch sections (II).

Structure 4 – A number of postholes and gullies represent the surviving elements of a trench- and post-built structure located in a poorly defined area severely truncated by the dragline in the central southern part of the site (461N/420E; Fig. 2.20). Structure 4 consisted of two longer gullies up to 6.4m long, 0.09m wide and 0.08m deep (4999 & 15871), and a minimum of 12 postholes, 0.34–0.7m in diameter and up to 0.3m deep; they enclosed a floor-area of c. 20sqm. Two small gullies, 884 and 947, may also have been part of this structure.

As is apparent on Figure 2.20, the southern of this building's main gullies (4999) appears to have been truncated by a 'U'-shaped trough/gully setting, 4997. Some 4.0m across, it is conceivable that this represents the northeastern gable-end of a subsequent building at this location (perhaps dating to Phase 2).

Structure 5 – Located within the northern corner of the RBII Enclosure Annex (360N/495E; Fig. 2.20), this large post-built structure (c. 15.25 × 7.6m) was constructed from a minimum of 55 postholes, double-postholes and stakes (the area had been severely

truncated during machining). With a floor-area of approximately 115.5sqm, the structure was divided internally into eight or 10 bays, each measuring c. 13.4sqm and $3.6 \times 3.6\text{m}$. A number of slots and gullies were also present, recorded as ‘timber’ slots during excavation (Contexts 1125, 1134, 1161 & 1180), into which several of the postholes were cut at regular intervals. These features suggest that Structure 5 was probably constructed using wattle and daub walls, with posts and wattles inserted into the base of the slots. No pottery was catalogued from this structure, but it underlay well-dated second-century ditches and gullies, and was aligned with the later first-century layout of RBII. The postholes were 0.28–0.48m in diameter and 0.15–0.4m deep.

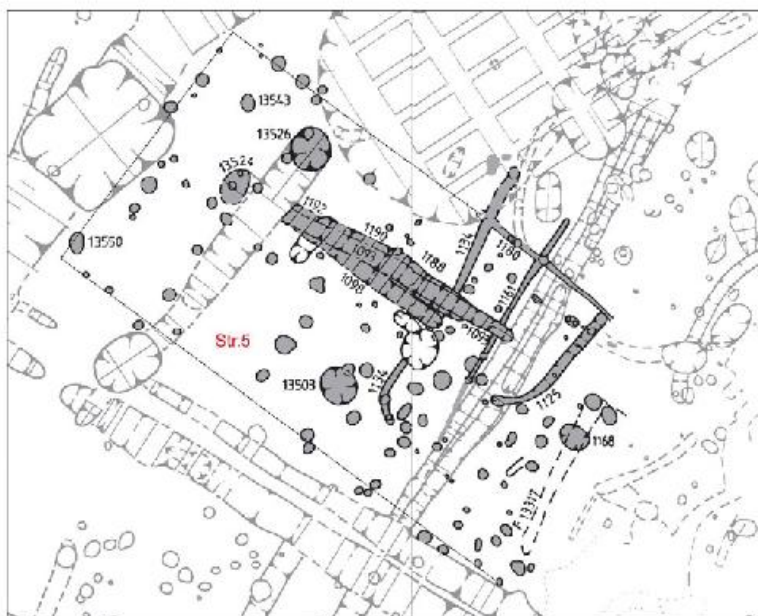
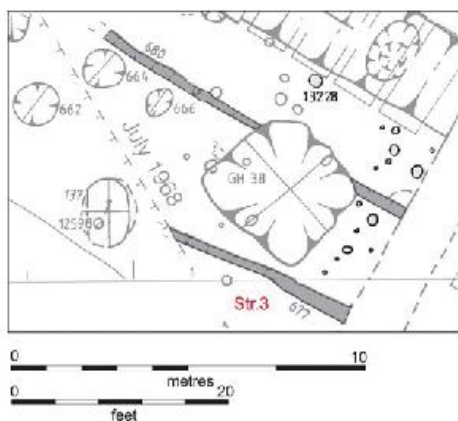


Figure 2.20. Plans of Structures 3, 4 and 5.

Kilns Rosemary Jefferies

The overall character of the area's kilns has already been outlined above in this phase's *Western Enclosure* section, and need not be repeated (see [Fig. 2.17](#) for locations).

Kiln 7 (171N/555E; Archive Refs: Feature plan: 2670; Notebook: 240.24–6, 120–1) – This was built at the junction of the brickearth and gravel. It is unclear from the record whether the kiln was dug into a ditch, or between two ditches, as it was partly destroyed by the construction of the 'Kiln Ditch' (296). The area of the kiln had been badly damaged before the excavation by a quarry road, and was destroyed before excavation had been completed. Yet, sufficient remained for observation and it is probable that the general structure of the kiln was that repeated by Kilns 8 and 9, with a fan, or perhaps 'T'-shaped stoke-pit. The kiln wall was fired hard to a depth of 0.46m; behind the kiln wall the clay was still plastic (described as 'raw'). The fill of the structure contained large stones, but no charcoal or waste pottery. The records seem to suggest that the kiln was free-standing and surface-built. The usual method of construction for such a kiln would be in a small pit.

Dimensions:	Max length	Max width	Max depth
Construction pit	2.13+m	c. 1.5m)	0.45m
Chamber	1.98+m	1.22m	0.44m

Kiln Furniture – Although the feature plan shows three cigar-shaped objects that are probably firebars, none could be located; there may have been others in the ditch fill.

No pottery is recorded as having come from the kiln, but the RBII ditch adjacent contained shell-tempered pottery resembling the waste from the morphologically similar Kilns 8–9, and this material is quite likely to have been waste derived from Kiln 7.

Kiln 8 (263N/531E; pub. ref.: Swan 1984, 'oven 2', MF 296 R; Archive Refs: Plan and section 1011) – This was constructed in the loam spread that sealed Kiln 9 (below). The elongated firing chamber was lined with clay, approximately 0.02m thick. Part of the wall on the south side of the chamber had collapsed inwards. On that side the clay was still plastic behind the wall. This may represent a localised repair to the kiln. On the north and west sides of the chamber there was a packing of loam and pebbles behind the kiln wall.

It is unclear whether the floor of the chamber was lined with clay,

but the fact that the sand beneath the floor was fired red suggests that the lining was either very thin or non-existent. The maximum depth of the chamber was approximately 0.09m. At the junction of the chamber and the stoke-pit there was a slight return of the chamber wall, but this did not form a flue. The stoke-pit was semi-circular and c. 0.3m deep. Associated pottery was mainly shelltempered ledge-rimmed jars.

Kiln Furniture – There were four firebar fragments (max L. 100mm; total wt. 0.53kg), none of which were end pieces and, as such, no estimate of the minimum number of firebars can be made. The firebars are too fragmentary to give any indication of their possible use in the kiln.

Dimensions:	Max length	Max width	Max depth
Construction pit	3.35m	0.66m	-
Stoke-pit	1.37m	1.68m	-
Chamber	1.52m	0.46m	-

Kiln 9 (269N/528E; pub. ref.: Swan 1984, ‘oven 1’, MF 296, right) – This was earlier than Kiln 8; it lay adjacent in a hollow that had been infilled with the brown/black pebbly loam spread into which Kiln 8 had been cut. The construction was the same as Kiln 8: a long narrow chamber, no flue and a fan-shaped stoke-pit. It was oriented SW–NE, with the stokehole to the NE; no charcoal was identified. The remains of an arch were recorded at the entrance to the firing chamber, and the chamber also had a pedestal at its end. Associated pottery was mainly shell-tempered ledge-rimmed jars.

Dimensions:	Max length	Max width	Max depth
Construction pit	2.59m	1.07m	0.46m
Stoke-pit	0.61m	1.43m	0.3m
Chamber	1.83m	0.46m	0.15m

Kiln Furniture – There were 10 firebar fragments (max L. 282mm; total wt. 3.41kg) and three end pieces found (max L. 145mm; total wt. 1.09kg).

Kiln 10 (370N/150E; Archive Refs: Feature plans: 510; section 1243; NB 34.95) – This structure was excavated in August 1967. The notebook entry is very brief, and the feature plan appears unfinished. The kiln seems to have been aligned NNW/SSE, with the chamber

mouth at the southern end. It was constructed approximately parallel to the east of the inner ditch of RBI, some 0.9m from the edge of the feature. It may have been constructed alongside an inner bank.

The chamber was pear-shaped, just over a metre long, with a maximum width of slightly less; its maximum depth was c. 0.38m. While neither a flue nor a stoke-pit was recorded, on the eastern side of the chamber, some clay walling was noted *in situ*. No kiln furniture or *in situ* pottery was recorded, and this may simply have been an oven.

Dimensions:	Max length	Max width	Max depth
Construction pit	1.07m	0.76m	-
Chamber	1.02m	0.76m	0.38m

Kiln 11 (520N/518E; Archive Refs: Plan/Section 582.4; NB 80.18) – This was excavated in very dry conditions in May 1969. It was not associated with any other feature. A construction pit oriented NW–SE had been dug into sand. At its northwest end the pit was 0.6m deep, and sloped up to a maximum depth of 0.45m in the southeast. The kiln chamber was pear-shaped, c. 1.1m along the main northwest–southeast axis, and built into the southeast part of the construction pit. Both the chamber wall and its floor were clay-lined. In the southwest section of the chamber the clay was c. 0.08m thick, hard-fired and oxidised. Behind this layer the construction pit’s clay lining was still in a plastic state.

It is unclear whether there was a kiln flue. At the northwest end the kiln narrowed and fired clay remained *in situ* on the east side, with only very little fired clay observed on the west side. On the floor of the kiln itself there was a charcoal spread, which could indicate the presence of a flue. The construction pit wall rose steeply at this point. Beyond the end of the kiln structure the construction pit floor rose upwards from a depth of 0.18m to 0.03m over a distance of c. 0.5m. It is probable that this was a stoke-pit, or more properly a fire pit, in which the fire was built but was stoked from ground level. A fragment of a rectangular sectioned firebar was recorded. Associated pottery was again mainly shell-tempered ledge-rimmed jars.

Dimensions:	Max length	Max width	Max depth
Construction pit	0.88m	1.07m	0.46m
Stoke-pit	0.51m	0.56m	0.2m
Flue	0.46m	inner c. 0.35m outer 0.25m	-
Chamber	0.56m	0.64m	0.41m

Kiln 12 (580N/580E; pub. ref.: Swan 1984, MF 297 L; Archive Refs: Plan/section 602.1; NB 97.21–74) – Kiln 12 was excavated in 1969, and was recorded as being rather fragmentary. The chamber was oval in plan, 1.15m long, 0.6m wide and approximately 0.1m deep. Clay lining remained *in situ*, which graded through from oxidised surface to plastic clay. The chamber floor was not lined, and there was no evidence for either a flue or stoke-pit.

The kiln structure was oval, cut into natural sand (no trace of floor lining), and was 0.99m long with a clay lining. It was aligned northeast–southwest. The lower fill comprised charcoally pebbly loam; the upper, brown loam having much tumbled fired clay and also square-sectioned firebar fragments, together with pottery. No direct traces of either a stoke-hole or a flue were noted. A possible flue opening could have been where a break in the lining of the oven was noted. The clay wall at the chamber's NE end was in a plastic state, possibly indicating that this was the far end of the kiln. Associated pottery was mainly shelltempered ledge-rimmed jars.

Dimensions:	Max length	Max width	Max depth
Construction pit	1.19m	0.61–0.69m	0.1m
Chamber	1.14m	0.61m	0.1m

Kiln 13 (618N/436E; Archive Refs: NB 82.22) – This structure was originally identified as an oven, reinterpreted during post-excavation as a kiln, and is now once again thought likely to be an oven. Oval in shape, oriented east–west, with sloping sides and rounded base, it possessed both a fired clay lining, and a large area of fired clay, which probably derived from the walls. In addition were found some patches of unfired light yellow clay, a cluster of large stones and some charcoal and pottery (this including vesicular sherds and one with a rebated rim, dating the feature to the first century AD). That a large area of fired clay was found, in a position suggesting that it was structural in origin, and that it derived from a roof, led to this feature originally being interpreted as an oven, rather than a kiln. While its

shape, and the presence of raw clay (used in Kiln 22 for sealing the flue), was thought to argue for it having been a kiln, this structure would appear to be too small for this to be the case. Structurally, it is consistent with an oven's construction, whose roof is more likely to be of fired clay.

Dimensions:	Max length	Max width	Max depth
Pit	1.07m	0.56m	0.18m

Kiln 14 (633N/568E; Archive Refs: Plan/Section 848–9; NB 104.20, 45–9, 107.29) – The structure was poorly preserved, as the area had been damaged by during machining and the ground compacted. It was aligned southwest–northeast, with a potential stokehole on the northeast side; both were sited within a large, irregularlyshaped hollow, approximately 3.05m across, which was cut into the southern end of a large later Iron Age gully and another gully running WSW–ENE. There was no evidence for a flue or stoke-pit. Originally interpreted as a series of pits, most of the pottery was found in a pebble layer (this largely later first- to early second-century), and in the dark loam above the pebbles (this a collection of later forms and fabrics). ‘Belgic bricks’ were noted as present; presumably these were firebars. The base of the pit contained reddened gravel, and fired clay was still plastic on the sides of the pit. There is some doubt as to whether this was a kiln, or whether it represented a clamp firing. Although some waste flakes do occur, and there are many joining sherds, the assemblage resembles those from other early kilns; the definite verification of this feature as a kiln must unfortunately remain unresolved.

Kiln 15 (150N × 215E; Archive Refs: Plan 270; Section 7; NB 18.72–3, 19.76) – This was excavated in July 1966 by Tom Jones, who interpreted it as an oven. It was partly destroyed by a later gully aligned southwest–northeast, which was not traced beyond this point. The kiln was cut into the inner ditch of the RBI enclosure, but neither the feature plan nor the notebooks mention this, and the section drawing did not show the kiln cutting the ditch fill.

While originally described as an oven, the feature – which was of oval plan with a very short or absent flue – belongs morphologically to the group of early kilns from the site. It was aligned north–south, with the entrance to the north. The chamber wall was clay-lined, and varied in thickness from 0.08m to 0.3m. The interior was reddish, grading to plastic yellow clay backing. The floor was ‘level, paved with largish pebbles’ (0.05–0.08m diam.). Onto this was smeared c. 25mm of clay, the surface of which was blackened, while that beneath

was oxidised.

While no flue was recorded, the presence of *tegula* pieces on either side of the chamber entrance suggests that an attempt had been made to repair a damaged flue with tile, as in the case of Kiln 2B (see below). The entrance was 0.23m wide. The area beyond the structure's mouth was not excavated and it is, therefore, impossible to know whether or not there was a stoke-pit. From the general kiln design, it would seem likely that there was. The structure appeared to have been 'dismantled' (NB 19.76), and there were few pottery sherds in the structure (these all second-century in date). Firebars were also present: one oval in section, but also splaying at one end, where it had clearly been broken off a fired clay surface; others were 'fish-tailed' in shape, with the main bar of oval section, but the ends wedged-shaped. From the pattern of oxidisation and reduction, they seem to have been used in a horizontal position, probably on the floor of the kiln.

Dimensions:	Max length	Max width	Max depth
Construction pit	>1.19m	>1.12m	-
Stoke-pit	-	-	-
Flue	>0.08m	0.23m	-
Chamber	0.86m	0.79m	>0.05m

Kiln 16 (730N/399E; Archive Refs: Plan /Section 786; NB 98.16–29)
– This apparently was excavated and recorded in haste over two days during gales in November 1969. It lay some 7.5m to the southeast of Kiln 4, and was orientated west–east, the flue being sited on the west side. It is not altogether clear whether there was a stoke-pit. A sketch plan shows a gap between the flue and ditch F8, and the excavator (Margaret Jones) described this as being 'alongside' the ditch. However, Feature Plan 786 shows the kiln flue cut from the ditch, which was probably itself used as the stokepit. Ceramic evidence from the ditch, however, is largely later, and it is possible that the ditch was cut across the kiln stoke-pit. The kiln consists of an oval clay-lined chamber, relined once, both linings being fired to a bright red colour. The clay backing to the linings was described as 'raw' (i.e. unfired). This occurs as part of the firing process, when the clay goes from fired red to plastic; the chamber floor was reddened gravel. A firebar was recovered from the flue, and several more from the chamber. Associated pottery was mainly shell-tempered ledge-rimmed jars.

Phase I – The Phase I chamber wall varied in thickness from 0.05–0.08m to 0.25m at the flue mouth. In section, the Phase I chamber walls were concave and shallow. It is not possible to estimate the

kiln's original depth. The flue was elongated and tapered from the chamber to the mouth, and appears to have remained in use during Phase II.

Dimensions:	Max length	Max width	Max depth
Construction pit	>1.63m	>0.69m	-
Stoke-pit	-	-	-
Flue	>0.61m	Inner 0.51m, outer <0.25m	-
Chamber	>1.02m	0.69m	>0.2m

Phase II – This saw a complete relining of the kiln chamber. The chamber wall sloped outwards from the floor. During the relining of the kiln the base of a pottery vessel was incorporated into the wall lining; the flue was retained from Phase I.

Dimensions:	Max length	Max width	Max depth
Construction pit	>1.63m	0.69m	-
Stoke-pit	-	-	-
Flue	>0.61m	Inner 0.51m, outer <0.25m	-
Chamber	0.97m	0.56m	>0.15m

Phase 2 – Early Second to Mid Third Century AD

To all intents and purposes, the industries associated with the Western Enclosures-area had stopped by this time, although some depositional activity is still in evidence in Enclosures B27, B28 and B36. In the main, though, the focus of occupation and industry had switched to the Southern Enclosures, while the functions of the Central Enclosure continued.

The Central Enclosure

This area appears to have remained a focus of settlement activity through the second century AD

(Fig. 2.21). Its circuit was elaborated (perhaps replaced in parts) by the digging of a ditch external to that of the Phase 1 enclosure, at least on three of its sides. The fenced plot was slightly realigned, but remained for at least part of the phase, still with a major roundhouse structure (PG71) opening onto an entrance within its eastern side. Burial continued within RB Cemetery II (see [Chapter Four](#)), and in Cemetery III just north of the main enclosure. Other than this, the Central Enclosure appeared to be undivided. Wells 4 and 6 remained in use, at least initially; the large post-built structure of Phase 1 was replaced by a similar, but larger, aisled structure on much the same alignment (Structure 9). The enclosure's main, apsidal-ended building – Structure 7 – continued to stand and function. As will be argued below, its demise (and interpretation generally) is inferentially linked to the second-century closing deposit of Well 4.

The Enclosure

The new outer ditch followed the alignment of the inner ditch so closely that the latter must have still been extant, or at least visible ([Fig. 2.22–3](#)). It may have been an attempt to create a 'double ditched enclosure' (this area of Mucking being so-termed from the start). The later ditch (A2) did, however, cut through the earlier ditch that ran southwest from the corner of the Central Enclosure (ditch A2N), suggesting that this, at least, had gone out of use by this point. Around the south side of the enclosure, this outer ditch was, for the most part, represented by a single cut (just one episode of recutting was evident at the southeastern corner, where a square corner was recut as rounded). This boundary was approximately 2.5m wide and up to 0.7m deep. It may have been embanked on the inside. Each of its depicted sections indicates a 'pebble line' or fill-divide approximately halfway up the fill sequence, which is invariably thicker on the northern side; this may represent weathering of an associated bank. The eastern stretch of the outer ditch narrowed and was shallower (up

to 0.5m deep). It lay in the brickearth part of the site that was not intensively investigated; although its line appears to have tapered out part way along the side-length of the enclosure, it may simply have become shallower and less easy to discern in that subsoil. On the western side, the ditch sequence was complicated by the series of earlier, Conquest Period ditches. This stretch of the outer ditch also had an internal bank, to judge from the weathering lines of pebbles. The external ditch did not appear to continue around the northeast corner of the Central Enclosure, and it may be that the inner ditch remained extant, at least in the earlier part of the phase. In the later part, a series of large pits were dug into this ditch-line (6585, 6583, 6438 & 6440), into which quantities of pottery (of mixed date) were deposited.

The main internal division of the Central Enclosure remained the fenced plot, originally set out in Phase 1. In Phase 2, this appears to have undergone a slight realignment, being set just to the east of its former line.

Structures

Three structures are attributed to Phase 2. Both Phase 1's granary (Structure 1) and Structure 7's main, apsidal-ended building are also thought likely to have still stood during at least part of this phase (Figs. 2.7 & 2.21). There is no reason why the key building succession – the aisled barns Structures 2 and 9 – should have occurred at the same time as PG71's rebuilding of PG73.

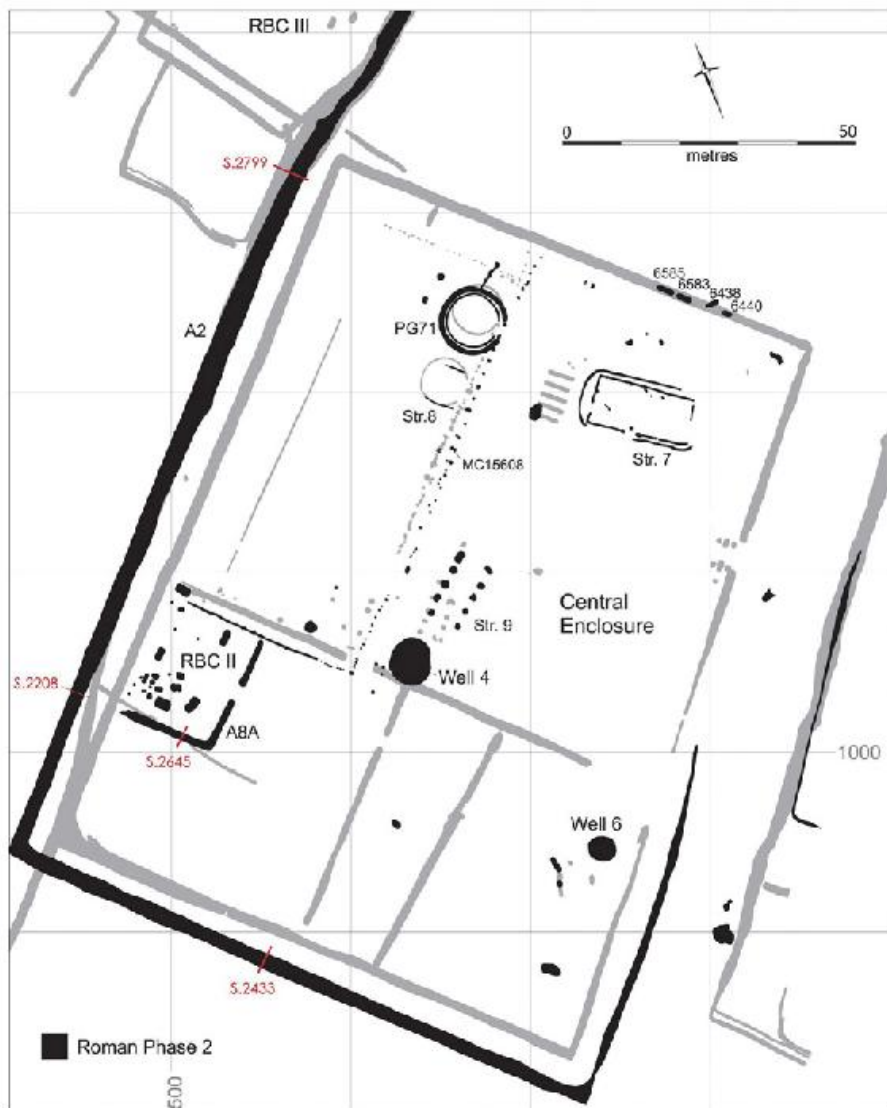


Figure 2.21. Central Enclosure: Phase 2 plan.

Structure 9 (1090N/662E) – This was located centrally within the Central Enclosure, c. 4.6m northeast of Well 4 (Fig. 2.24). Constructed from five pairs of postholes, their substantial posts – 0.72–1.52m wide and 0.66–1.0m deep – enclosed an area of c. 43.2sqm, with external dimensions of c. 6.7 × 10.0m. No traces of walling or internal partitions were present. The post-range presumably represents the main internal structural supports for an aisled building, but no external wall bases or supports were identified. Finds from Structure 9's postholes comprised nearly 200 sherds of pottery (mainly grey

ware jars and flasks of second-century date), plus occasional fragments of lava quern and tile. No mortaria, samian or amphorae sherds were recovered, and none of the pottery was identified as being imported. While the proximity of this structure to Well 4 might suggest it as a potential source for the destruction deposit contained within its upper fills, it showed no signs of destruction by fire (with some of the posts, to judge by their 'ghosts', having rotted *in situ*); the source of the Well 4 deposit must, therefore, have lain elsewhere.

PG71 (1240N/665E) – This consisted of a double-ring arrangement, presumably the inner wall and an outer eavesdrip gully ([Fig. 2.24](#)). Located within the fenced area in the northern corner of the Central Enclosure and representing a direct rebuilding of PG73, its southeast-oriented entrance faced towards Structure 7. The inner ring was 8.53m in diameter, enclosing an area of c. 60sqm; the gully was 0.05–0.1m deep and 0.3m wide. The outer gully was 10.6m in diameter, c. 0.9m wide and 0.3–0.35m deep. The building most probably had an external porchlike structure, with postholes located either side of the 3.25m-wide entrance. A large quantity of pottery and iron nails was recovered from the gullies. The pottery catalogue lists 586 sherds. While including 10 sherds of samian and three of amphorae, these were mainly grey ware jars and dishes, but with some earlier products (often abraded), as well as a number of Nene Valley sherds. Infilling of this feature seems to have started before the end of the second century.

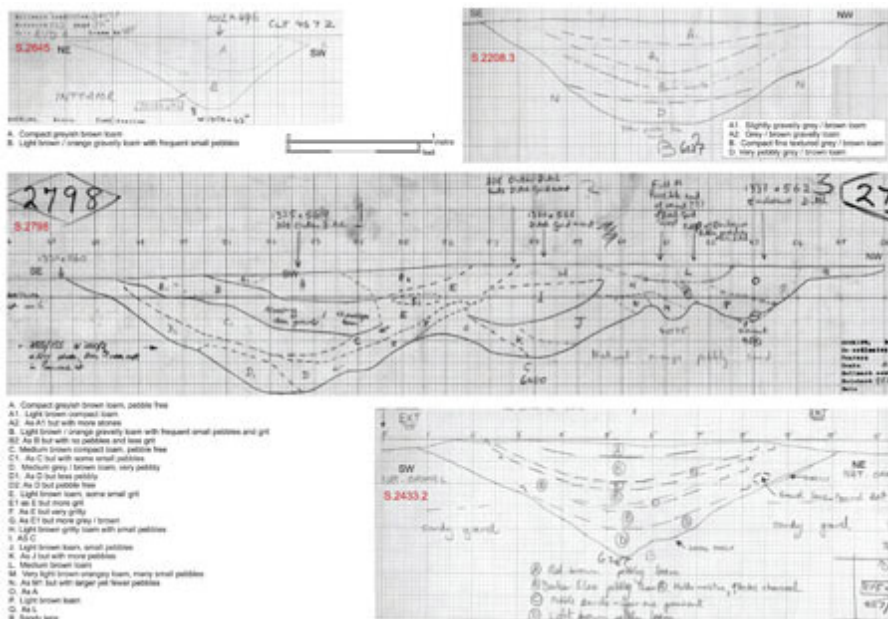


Figure 2.22. Central Enclosure: ditch sections.

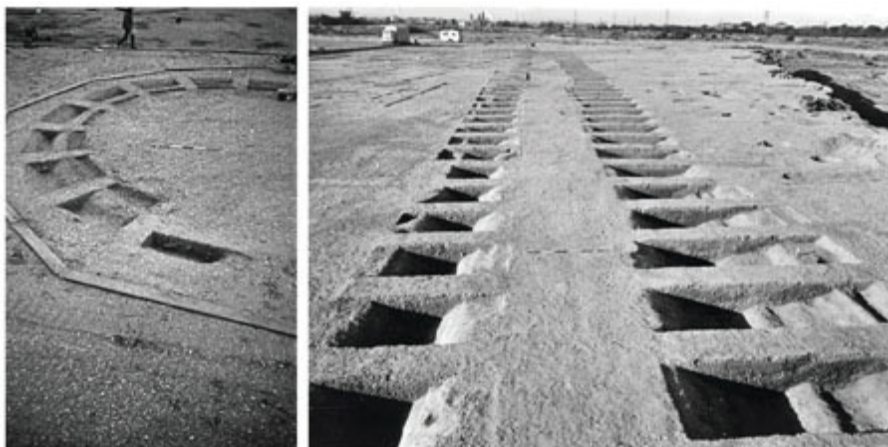


Figure 2.23. Photograph of the ditches of the Central Enclosure (right) and left, PG71.

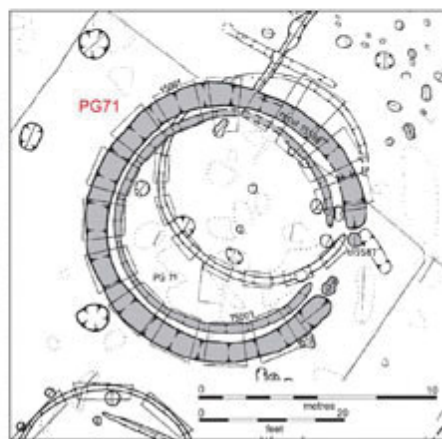
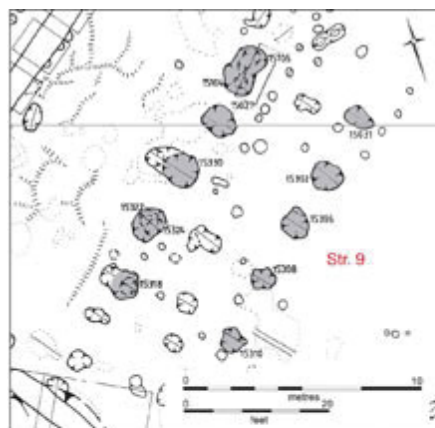


Figure 2.24. Plan and photograph of Structure 9, and plan of PG71.

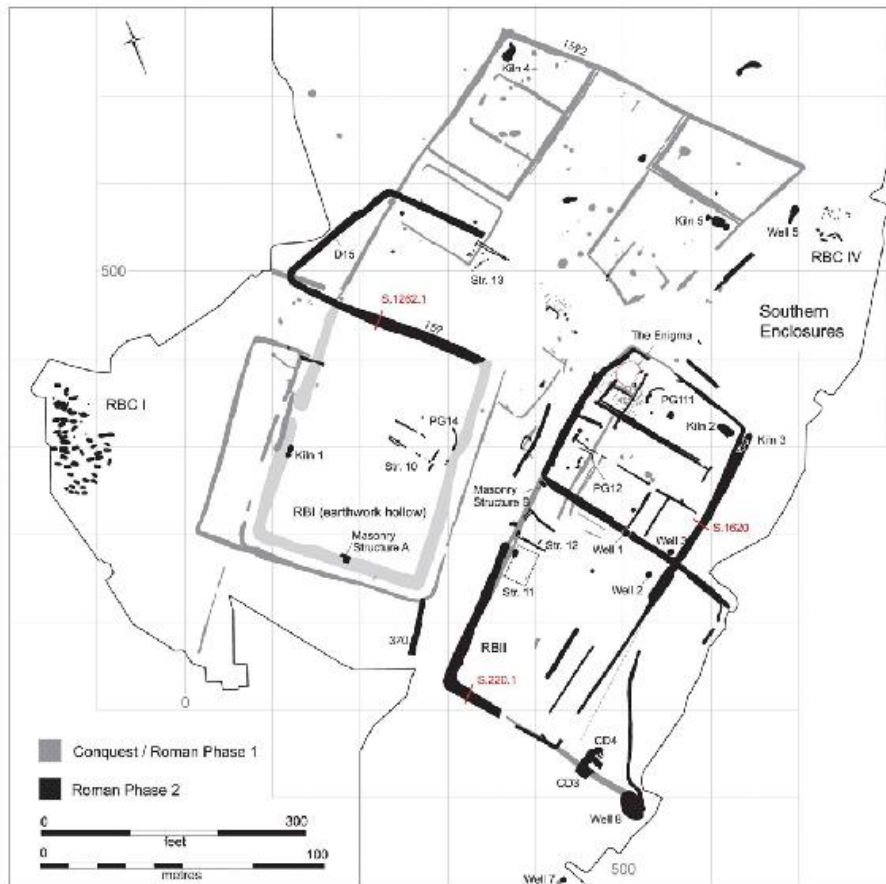


Figure 2.25. Southern Enclosures: Phase 2 plan.

The Southern Enclosures

Second-century activity in the southern enclosures continued to focus on the three areas already laid out here in Phase 1, albeit with some alteration and change of focus (Fig. 2.25). Little recutting of the ditches in the northern part was seen, but these seem to have remained as earthwork features, at least in part, as Kilns 4 and 5 appear to have been deliberately set at corners of the enclosures. A cremation cemetery lay immediately to the east of this area in the second century (RB Cemetery IV; see Chap. 4). To the southeast, the RBI-related enclosure seemed to have

continued as a landscape feature, with pottery production in Kiln 1, the construction of Masonry Structure A – a possible kitchen – and the large hall building, Structure 10, all contained within its circuit. A major recut of the northern boundary ditch of RBI marked further subdivision of this area, with a northern enclosure added (D15); this may have contained further unidentified structures, but in truth its plan makes no obvious sense. To the east, the circuit of the RBII enclosure was largely maintained through recutting, but the enclosure itself saw subdivision. These contained Structures 11 and 12, with Well 2 in the southernmost part, Wells 1 & 3 and PG12 in a central zone, and Kiln 2 and PG111 in its northern portion. Kiln 3 must belong to a slightly later part of this phase, dug as it was through a recut of the eastern boundary ditch to the enclosure. The two malting floors (CD3 & 4) lay outside the enclosure to the southeast, along with Wells 7a and 8 (see, though, *Wells*, below and Phase 1's *Southern Enclosures* section concerning the probable earlier origin of some of the wells in this area).

In this phase burial also continued within RB Cemetery I to the west.

The Enclosures

Later recuts of the Phase 1 enclosure system in the northern part of this area may well relate to the earlier decades of Phase 2, particularly the major recut of the ditch running around the northwest corner (into which Kiln 4 was inserted). This ditch was up to 2m wide and 0.6m deep (recut 1592); it remained a hollow into the later Roman period, to judge from the contents of the 'late loam' that formed its upper fill. Internal ditches F3A/B and F12/15 also saw major recuts, with second-century pottery deposited in their lower to middle fills. This was, therefore, still an actively used area during the second century

AD.

To the southeast, the RBI-related enclosure probably remained an extant part of the system (with RBI itself still an earthwork hollow in parts), although it may have gone out of use during Phase 2, perhaps along with the abandonment of Kiln 1. This phase did, though, see the timber-built Structure 10, and the digging of ditch 370, which butted onto the RBI-related enclosure ditch D2, and must represent part of the same system. To the north, a further enclosure (D15) was laid out (either contemporary with the RBI-related enclosure, or subsequent to it). This was bounded on its southern, western and northern sides by ditch 159, which itself saw later recuts. The southern part of this enclosure thus comprised a probable recut of the northern ditch of RBI itself. Although no formal recut was identified in the *Atlas*, much of this ditch remained unexcavated, and what sections were drawn indicate a clear difference in fill, suggesting a recut up to 0.75m deep (Fig. 2.26). This matches the ditch profile on the other sides of the enclosure. The resultant enclosure was apparently unenclosed on the east side, but this coincided with an area of brickearth, in which a slighter feature may have gone unrecognised (the base plan is particularly 'blank' at this point). There were many undated and unexcavated postholes within this enclosure, including some possible structural features (e.g. PHB34 was identified as Anglo-Saxon on the basis of its morphology, but its postholes yielded only Romano-British pottery).

The RBII enclosure area appears to have been substantially recut during Phase 2. The main east–west internal division (201 in Phase 1) was also recut, and further divisions inserted to the north (Fig. 2.27). Smaller stretches of north–south ditch may have further subdivided these areas. The external ditches were generally up to 2.5m wide and 0.5m deep (though with depths up to 1.0m around its southern part); the internal divisions were somewhat slighter, up to 1.3m wide and 0.5m deep.

Structures

Within the area of the Southern Enclosures seven structures are assigned to this phase, with Structures 10, 11 and 12 being particularly impressive (Fig. 2.25). As mentioned, though, amid the area's many small unattributed features other structures are likely to have gone unrealised. Possibly marking a building's northeastern gable-end, this might include the 'U'-shaped gully cutting Structure 4 (see above) and a similar settings were present at 308N/386E (8607) and 505N/305E (4920/F.15830).

Structure 10 (305N/265E) – Identified as a timber building during

excavation, and located in the southwest corner of the site, this was c. 18.3m long and 7.4m wide (Fig. 2.28). It consisted of narrow construction trenches up to 0.36m across; the eastern end of the building cut the outer circuit of the South Rings. Within the construction ditches, stakes and small posts were set at regular intervals indicative of wattle and daub walls. The posts may also have been packed with pebbles. A second parallel ditch (8500), 4.28m long and 0.23m wide, was located 0.50m outside of the southwest wall. Two possible entrances were located in the northern and southern corners of Structure 10, the northern doorway measuring 1m wide and, the southern, 0.7m. The small posts and stakes were, respectively, 0.25–0.7m and 0.14–0.18m in diameter and up to 0.23m deep. Pottery recovered from them and the construction ditches comprised mainly second-century grey ware jars and dishes, with a sherd of Nene Valley beaker from a posthole; this suggests that the building was constructed in the first half of the second century AD. Further postholes to the southeast appeared to continue the wall-lines, and may represent part of this structure, or an adjacent one on the same alignment; some of these postholes also contained second-century pottery.

Structures 11 and 12 – These were identified from a number of postholes and potential base-plate slots in the northern corner of Enclosure RBII. This area was poorly recorded due to the nature of the loose soil matrix, making it difficult to distinguish features. Despite this, Structure 11 (160N/385E) appears to have consisted of a number of postholes, ranging between 0.3m and 0.46m in diameter and 0.1–0.3m deep (Fig. 2.28). Several were aligned on the enclosure ditch to the west and defined an area of c. 94sqm. A small quantity of second-century pottery was recovered.

Structure 12 (215N/400E) was located to the north of Structure 11 (Fig. 2.28). In addition to a number of postholes that may have been associated with a building, two parallel narrow ditches (715 & 3561), oriented northwest–southeast and 0.43–0.6m wide, may represent beam-slots. A timber slot (3578) was identified during excavation, 0.36m wide with a charcoal-rich fill, which lay parallel to a second similar-sized and oriented slot (3580); these both cut slot 3561. A small ditch (233), on the same alignment further to the southeast, may also have been associated; together these may represent a further timber building in this area, oriented roughly north–south and c. 4.6m wide. A number of small stakeholes were identified in the first slot, which also cut a small pit (3562) that was identified as a hearth with *in situ* burning and containing sherds of an indented grey ware beaker.

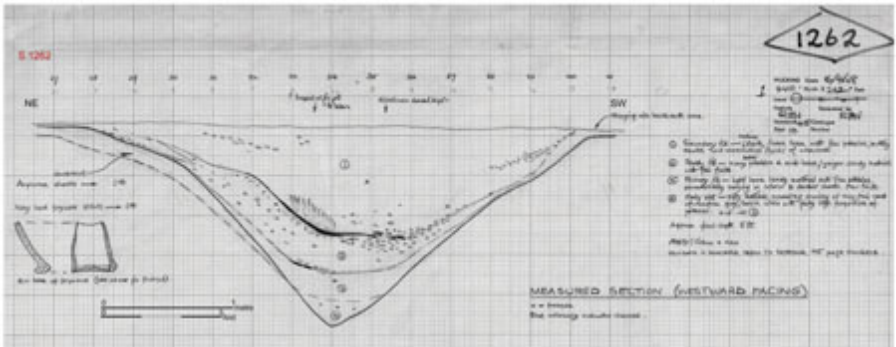


Figure 2.26. Section of ditch 159 (D15).

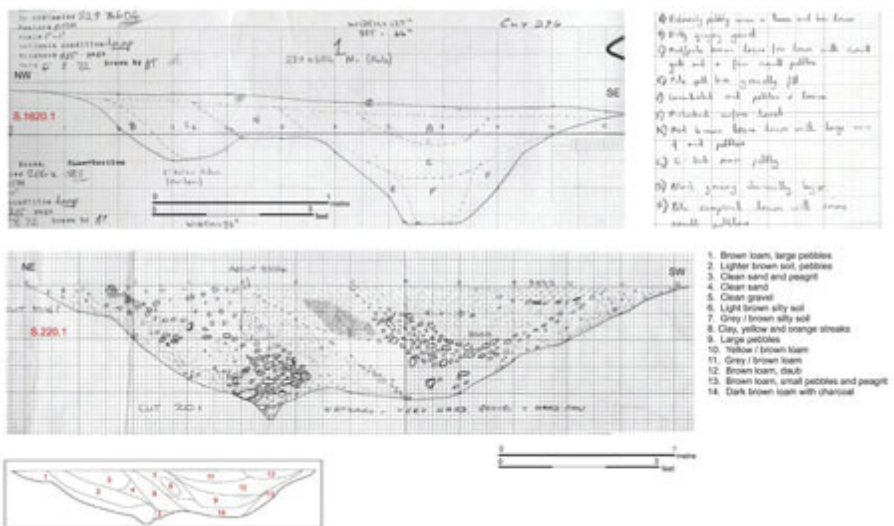


Figure 2.27. Sections through RBII ditches.

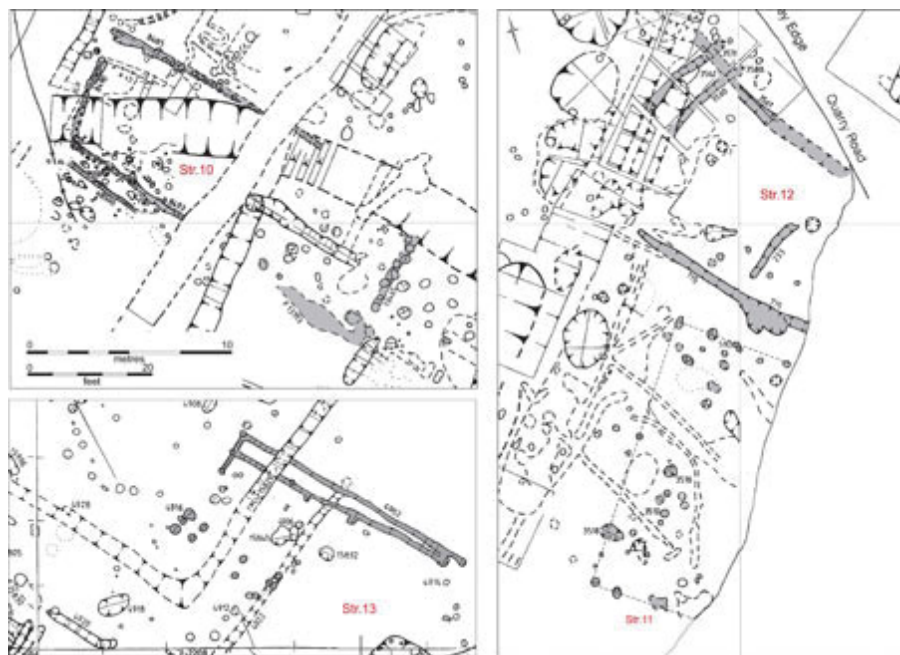


Figure 2.28. Plans of Structures 10–13.

Structure 13 (514N/325E) – This was only defined by two narrow parallel beam or sole-plate slots (4902) along its 12.0m(+) long northern wall (described as ‘timber slots’ in the notebook record; NB 68.34); there was also a shorter slot at their northwestern end (into which posts had also been inserted) and a group of postholes (4916) might also have been a part of its end-wall (Fig. 2.28). Postholes inserted into the parallel slots were between 0.3m and 0.5m in diameter and 0.1–0.25m deep; both the slots and postholes were filled with a black pebbly loam, and pottery from these features dated to the mid second century onwards. These features indicate that the structure was substantial in character and possibly of solid-/double-wall construction. Unfortunately, no further information could be located in respect of the southern and western slots to further interpret its nature, and various other postholes and slots/troughs in the vicinity may have related to either this or other structures.

PG12 (285N/455E) – This was located within the southwest angle of Enclosure RBII Extension (Fig. 2.48). Truncated by GH55, and itself cutting a later first-century ditch, this had an estimated internal diameter of 7.9m (c. 50sqm). The penannular gully was both 0.25m wide and deep, presenting a very steep profile. Several internal pits

may have been associated – notably Contexts 753, 755, 757, 759 and 761 – interpreted as cooking pits (0.8–1.2m wide and 0.1–0.28m deep), and which had associated stakeholes. A number of smaller post-or stakeholes formed a square setting, potentially an internal screen. No datable material was recovered from the gully, but three of the internal postholes contained second-century grey ware sherds.

PG14 (308N/307E) – This consisted of a eavesgully located on the eastern side of Enclosure RBI (Fig. 2.48), that was 7.5m long and 0.6m wide, with an estimated diameter of 8.6m (8579). Two pits, 8601 and 8599, may have been associated; the latter, measuring 1.48 × 0.46m, had sherds of Romano-British pottery and an iron pin. This dating evidence is, though, far from certain and it is always possible that the roundhouse itself might have been earlier; accordingly, it is also included within the Prehistory Volume's gazetteer listing.

PG111 (355N/540E) – This length of penannular gully (1100) was only identified as a possible structural element in the most recent period of post-excavation analysis (Fig. 2.48). It was 9m long, 0.33m to 0.46m wide and 0.18–0.4m deep. Accepting this as a structural feature, it must either represent either the eavesgully or wall-line of a roundhouse with an estimated diameter of 7.9m (50sqm). Two grey ware sherds and two samian sherds were apparently recovered from it. A pit, 1096, located immediately east of the gully, was 1.45m long, 0.82m wide and 0.86m deep; several grey and black Romano-British pottery sherds came from it.

Wells

As discussed in this section's introduction, the actual construction of a number of wells attributed to this phase was probably earlier and first occurred during Phase 1 (see Fig. 2.25 for locations). Their assignation here is based on artefact-dating evidence of their use/closing, and their first 'sinking' and early usage need not have resulted in any significant finds deposition. Conversely, the Anglo-Saxon pottery recovered from Wells 7 and 8 raises questions of just how long they may have continued to function.

Well 1 – Located in the southeast corner of the site (204N/504E; Figs. 2.29–30), this was truncated/obscured by GH58, from which a quantity of samian and later Romano-British fine wares was recovered (20 sherds in total). The well's relationship with the north–south-oriented boundary delineating the RBII enclosure and its extension was uncertain. Due to its truncation by GH58 the precise surface dimensions of this feature were difficult to ascertain, but, at a

minimum, it was 2.75m across and up to 4.5m deep, and contained 12 identified fills and lenses (A–L). The upper fills consisted of light brown pebbly loam and medium brown to grey sandy loam with occasional pebbles (these may relate to GH58). Lens D consisted of a distinct pink and charcoal/ash layer, with a clear interface with the surrounding matrix. Fills G–K represent a gradual silting of the well, with the flat ‘basal’ deposit of Fill C (depth, 1.07m) possibly attesting to a re-cutting of the feature or, more probably, the construction of GH58. Fills E and F, however, may relate to a deliberate dump of material, with ‘E’ consisting of a thin lens of burnt material at the base of these two contexts. The remaining fills comprised over 2.9m depth of gravel and sandy fills.

At c. 2.45m, the profile of the well changed to a distinct square-shaped cross-section, 1.1m across. Between 4.2m and 4.5m down a preserved *in situ* frame – forming two sides of the square – and collapsed planking were found. In the northwest corner there was also an upright fragment, possibly part of the vertical frame of the well. The planks were fixed using cross-halving joints, with four frame members and two side planks (boards) still in place, and a further four collapsed boards were recovered from the central part of the shaft; at this depth the well had narrowed to 0.9m.

At least 689 sherds (11.7 EVE) were recovered, including decorated vessels, beakers, flagons, flasks and jars, as well as samian and amphorae sherds (a late possibly North African amphora sherd was also found at c. 0.36–0.41m, perhaps deriving from the intrusive *Grubenhaus*). Pottery from the lower well fills is consistent with second- or early third-century deposition, and there is nothing to suggest that the well was dug before the end of the first century AD. It may, however, have seen relatively late infilling: the three shards of glass recovered from the bottom variously dated to the first to second century, later third to fourth century and ‘?Anglo-Saxon’. Other finds from the feature include fragments of *tegulae* (6), *imbrices* (3), bricks (2) and unidentified building material (26). It also contained seven fragments of rotary quern, a considerable number when compared to the total number of quern fragments recovered from all of the wells (15 in total). Of the 22 fragments of animal bone recovered, the majority were cattle (14 pieces). Fragments of a ring-headed pin and two nail fragments were found within the well’s fills, the latter attesting to a construction technique reliant upon the use of interlocking pieces of timber. A fragmentary iron brooch was also recovered (Cat no. 3465; see Haselgrove, Chap. 3). The pottery from the basal fills of the well included two complete or near-complete slipped grey ware jars, both Mucking products, dating to the second to third century. While the interpretation of this deposit will be returned

to in [Chapter Three](#), it is possible that this deposit may collectively represent an opening episode (with the deposition of complete vessels, possibly in the mid second century), with the feature later being ‘closed’ (infill-dumped pottery sherds, querns, glass and building material, etc.).

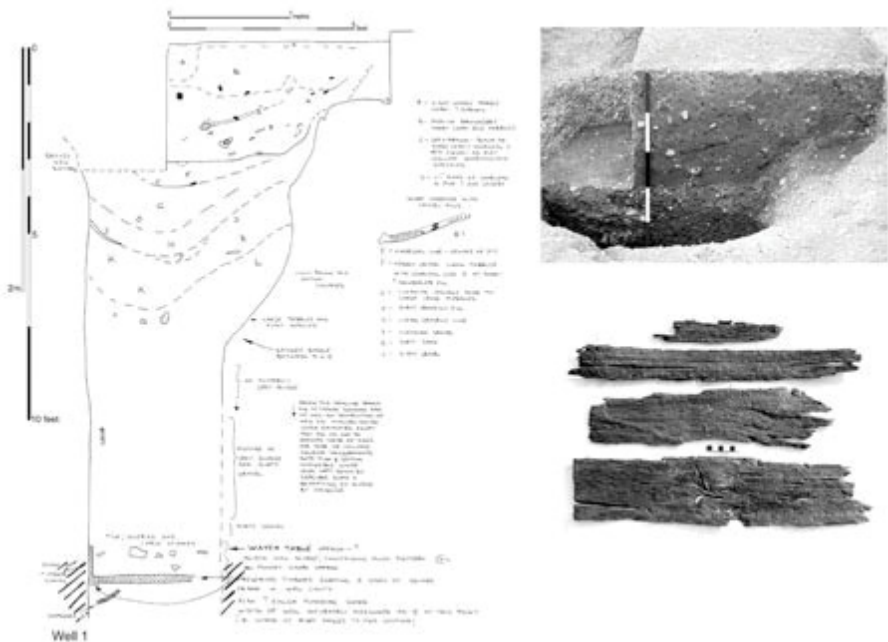


Figure 2.29. Section of Well 1, with section photo and detail of wood remains.

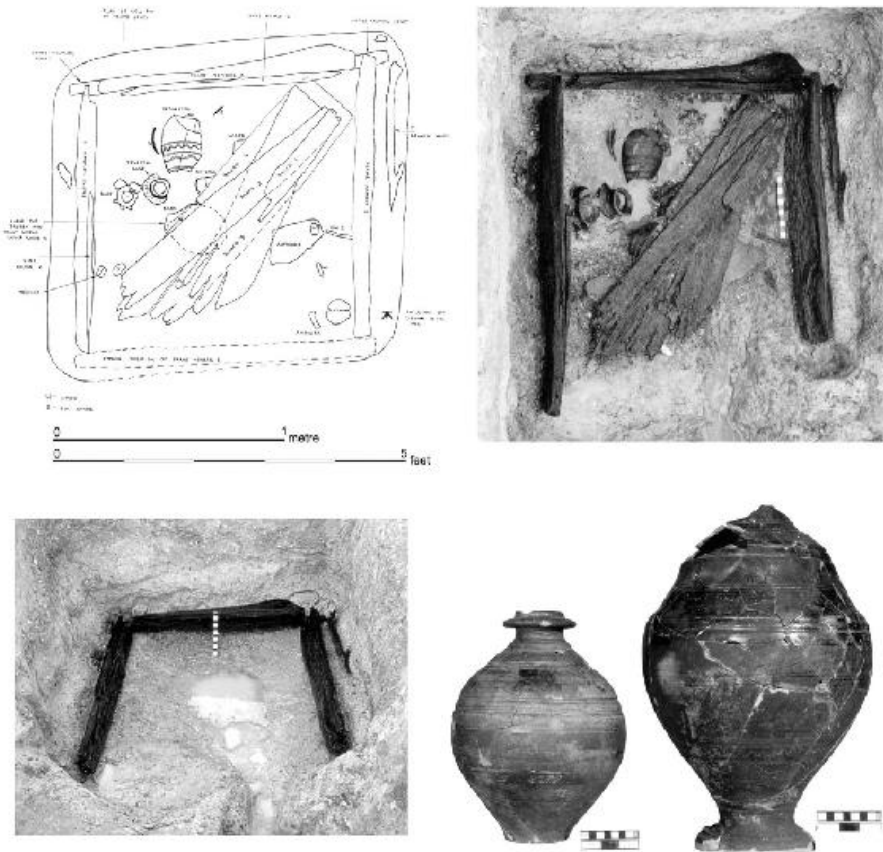


Figure 2.30. Plan and photograph of the base of Well 1, with whole pots in situ.

Well 2 – Situated south of Well 1 (160N/530E), this was partially mechanically excavated (Fig. 2.31). Of ovoid plan, with a surface-area of c. $2.35 \times 2.0\text{m}$, it was excavated to a depth of 2.75m, at which point clean gravel and sand was encountered. Although no timber framing or lining was found, staining indicative of decayed wood was identified at a depth of 1.6m. Finds from this feature comprised 13 fragments of building material and a minimum of 960 sherds of pottery (8.16 EVE), plus four sherds each of samian and upper fills indicating that it was infilled by the later second century. Two fragments of pipe-clay figurine (Nos. 2 & 3; see Johns & Jenkin, [Chapter Three](#)) were recovered from the feature's surface levels, as were some sherds of later pottery.

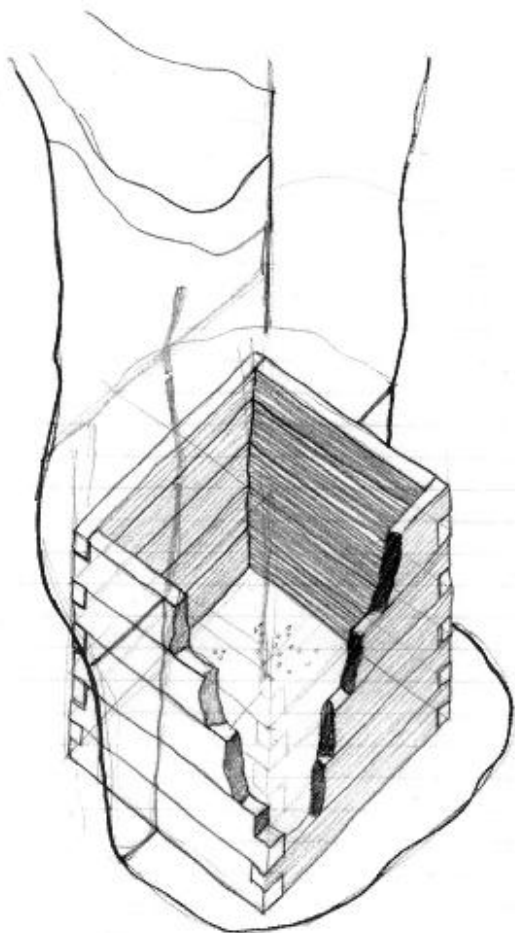
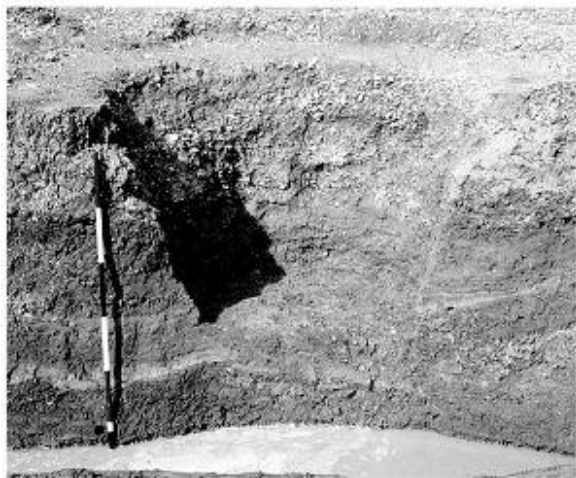


Figure 2.31. Photograph of Well 2 under excavation (top) and, below, archive reconstruction drawing of timber-framing technique of Wells 1 and 7.

Well 3 – Lying within a possible cluster of wells (Fig. 2.32; 182N/554E), this was located close to Wells 1 and 2, and was truncated by GH63 (as was Well 1). The relationship between Well 3 and the *Grubenhau*s is problematic, with the excavator suggesting that it was cut by the latter, but that this was only noticed much later. Some 1.85m across below the level of truncation, the well had straight sides, with a flat base c. 3m deep. The upper fill contained sherds of Romano-British pottery, a single fragment of lava rotary quern and animal bone. The upper deposit was a uniform medium brown pebbly loam, possibly representing natural weathering, but neither tip-lines or weathering cones were obvious in section. The remaining 10 fills consisted of weathered dirty sands and gravels, pebbles and clean sand; no timber traces were found. Romano-British pottery was retrieved from the bottom of the feature: a minimum of 60 sherds (2.69 EVE, plus six pieces of samian). The well seems to have been dug in the early to mid second century, and was backfilled by the later second century AD, possibly to level the immediate ground surface.

Well 5 – Lying a short distance west of Cemetery IV (693N/570E), this consisted of a central well-shaft and a shallow gully or access slope/ramp, oriented northeast– southwest (Fig. 2.33). Apparently excavated under dire conditions, it was nevertheless dug in c. 0.15m (6”) spits. Measuring c. 1.85m in diameter at the well-head, with the linked gully c. 3.75m long, it was distinctly pear-shaped in plan. What appeared to be steps had been cut into the gravels where the gully connected with the well. The wellshaft contained preserved timber-lining from a depth of approximately 1.68m. This consisted of a frame forming a shaft, c. 0.65 × 0.85m; it was formed by three sides of a square and a fourth with planks projecting outwards to form an apex. The bottom of the well was revealed at 2.3m depth, where the vertical uprights had been inserted into natural. Timber preservation was excellent, demonstrating a construction technique employing both sawn and split planks, with vertical supports. These latter elements were also split and sawn, but had shaped and stepped stakelike terminals for insertion into the base of the cut. The supports had narrow slots cut into them for the insertion of the side boards or planks, negating the need for nails in the lining’s construction.

Finds from Well 5 included 12 pieces of residual worked flint, a single piece of ironwork, four bone fragments and a minimum of 165 pottery sherds (2.03 EVE, plus a sherd of amphora), as well as three pieces of undiagnostic building material. In addition, a twisted copper alloy bangle was also retrieved from the upper 1m of the fills (Cat no. 387; see Appleby, Chap. 3). The pottery suggests that the feature began to be infilled before the middle of the second century; there was

with no weathering cones observed and a number of Anglo-Saxon pottery sherds were present (Hamerow 1993, 19). Well 7b was located c. 0.6m to the northeast of Well 7 and was c. $2.1 \times 1.85\text{m}$ in plan; its excavation revealed a shaft, possibly revetted with stone, c. 1.25m across.

Only totalling 288 sherds (3.37 EVE), complete differentiation of the finds from these wells is not possible, but the majority are recorded as coming from Well 7a. A minimum of 167 sherds of Romano-British pottery was recovered from it, although the majority came from the upper 1.75m. Other finds included a mortaria sherd, three pieces of glass, a lump of lead, 19 fragments of brick and tile, 67 animal bone fragments (31 of cattle), three nails, three rotary quern fragments and an arrowhead. Previously published in the Anglo-Saxon settlement volume (Hamerow 1993, 19), the construction technique and large quantity of Romano-British pottery recovered from Well 7a indicates that the complex was part of the Roman settlement. Insufficient data was recorded from Wells 7b and 7c to suggest a date for them, although the notebook records attest to the recovery of considerable quantities of Anglo-Saxon pottery (NB 361.66–88; the pottery was not, however, recorded in the computerised catalogue). While Well 7a seems definitely to be Roman in origin, as second-century grey ware sherds were associated with the internal framework, the other wells in this complex may perhaps have been later.

Well 8 – Situated c. 12.2m to the southeast of Corn-drier 3 (105S/505E), this was identified, after surface cleaning close to the edge of excavation, as a clear soilmark; Romano-British and Anglo-Saxon pottery sherds were recovered during cleaning. Oval in plan, its surface dimensions were 7.6m by 11.6m. Excavation demonstrated that ditch RBII was cut by the well and also the kiln ditch here. This later ditch is shown bending around the northeast corner of Well 8, clearly indicating that it was cut either shortly after the well, or when the well was still extant. Subsequent to surface cleaning and hand removal of the upper three fills, a machine trench was excavated across the middle of the feature, exposing its full profile and depth (1.54m). A total of seven fills were identified in section, with no apparent weathering cone; the upper fills consisted of alternate layers of clean or mixed dirty gravels. The straight, steep-sided nature of the sides and irregular base suggest that it was probably a wateringhole. Wood revetting of the well was found at a depth of 1.25m: three planks and roundwood staves.

The numbers of finds from the fills of the well were relatively low compared to the site's other such features. Only four pieces of animal

bone were found, along with a minimum of 120 sherds of Romano-British pottery, plus a sherd of samian and another of mortaria (all broadly second- to third-century in date). In addition, 10 fragments of building material were also recovered. An unquantified number of Anglo-Saxon pottery sherds were also found in the uppermost fills, indicating that the well still existed as a shallow depression in the Early Anglo-Saxon period (these were not included in the computerised record, but are mentioned in NB 362.51–61). Attributing a function to Well 8 is problematic as it was constructed using a different method to the other Romano-British wells on the site; a direct association with the corn-drier cannot be ruled out.

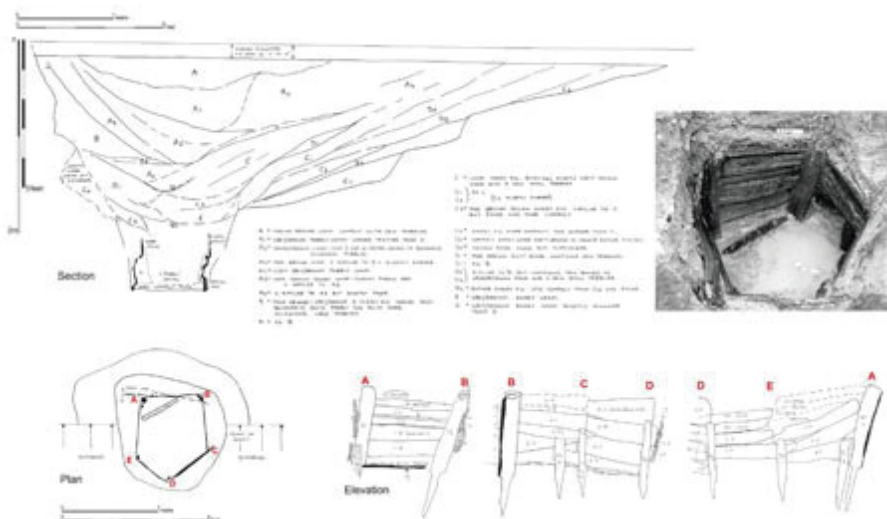


Figure 2.33. Plan, photograph and section of Well 5.

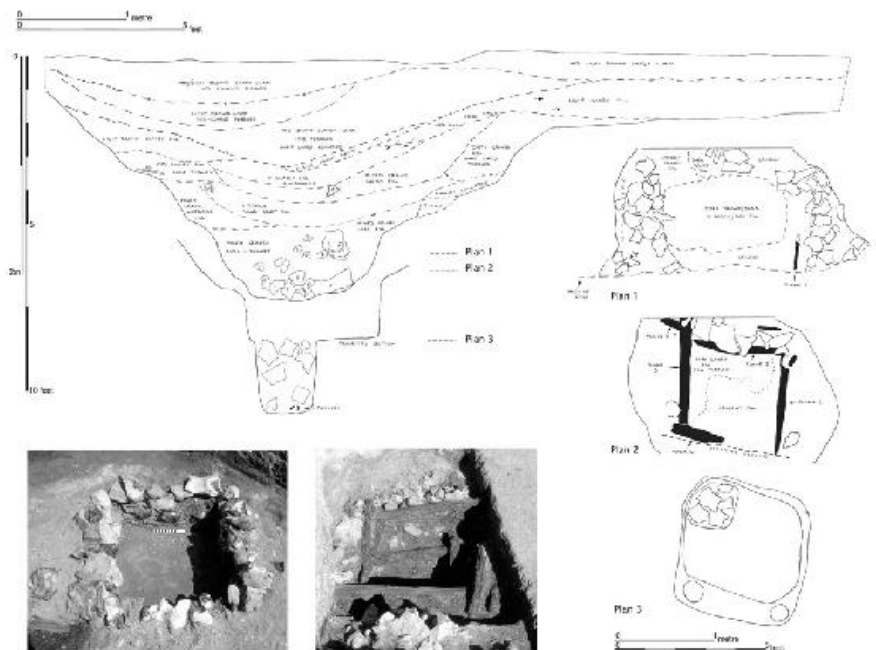


Figure 2.34. Plan, photo and section of Well 7a.

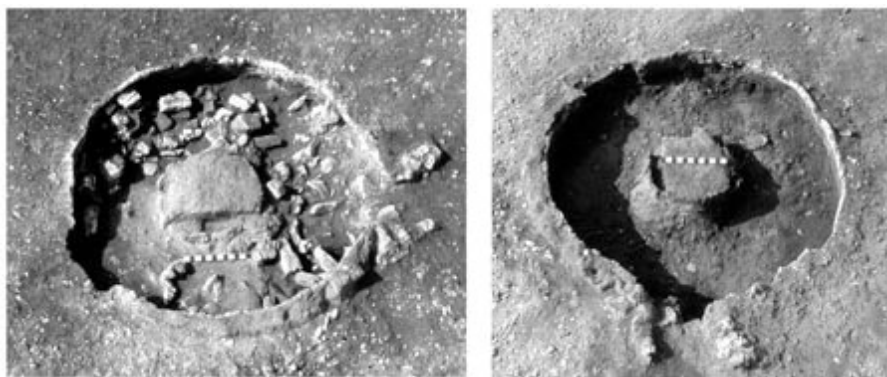


Figure 2.35. Photographs of Kiln 1 before and after excavation.

Kilns Rosemary Jefferies

The kilns were single-flued oval fired clay structures with central pedestals; most were sunk into the ground and thus survived relatively well (see Fig. 2.25 for locations). All of the collapsed fired clay debris within these features was collected during excavation, and samples taken from the kiln walls. Most of this material was hard-fired, reduced Fabric B tempered with vegetable matter, including in some

cases cereal processing waste. The actual structure of these kilns is further described below, but suffice it to note here that some of them had wattles incorporated (Kilns 2b, 3 & 4). Although it is not clear how far the kiln structures projected above the ground, they may have been semi-permanently domed, with the superstructure probably made from turf; some fragments of collapsed wall occasionally had finished rim-like edges (Jones & Rodwell 1973, 17). Evidence of patching and repair was noted in Kilns 4, 5 and 6, while Kiln 2b replaced the demolished Kiln 2a.

Rodwell (1982, 32–3, 69) has suggested that these kilns may be divided into two groups: those with firebars, and those with no evidence of a suspended kiln floor. However, there is evidence that kilns were used both with and without a central pedestal. No firebars were found *in situ*, and nor did any complete examples survive, but several firebars showed evidence of differential firing, suggesting that they had been placed in the base of the kiln. Many fragments were found in Kilns 1 and 4, but also a few possible fragments in Kilns 2 and 5. Kilns 2, 3, 4, and 6 all had internal ledges around parts of the edges (although only in Kiln 6 did it continue right the way around); in most cases, these ledges were higher than the pedestal. Rodwell has suggested that these ledges supported part of the weight of the kiln-load (*ibid.*, 32–3), or alternatively were constructional features (*ibid.*, 69), but that they were unlikely to have supported firebars. In passing, it must be noted that the absence of firebar fragments within the debris thrown back into a disused kiln does not necessarily imply that such pieces/equipment had not been used in that kiln (*pace* Rodwell 1982).

The fabric of the kiln structures, while to some extent variable, was nevertheless fairly consistent in content, if not in their degree and conditions of firing. It is clear that the potters tended to temper their pots with sand, but the clay used for the kilns had vegetable matter. Worthy of particular note is the use of cereal processing waste in the kiln structure, which also appears to some extent in the fabric of the smaller kilns, as well as in the kiln furniture discussed below.

Kiln 1 (290N/118E; pub. ref.: Jones & Rodwell 1973, 15–17, fig. 2, I; Rodwell 1982, 68, fig. 5.4; table 1, 29; Swan 1984, MF 298) – The kiln had been constructed within the area of the large pre-Roman Iron Age RBI Enclosure, close to its entrance (Fig. 2.35). It was not well preserved and there are problems with its interpretation. It had been constructed in a pit dug into the natural gravel and its relationship to the RBI ditch is unclear; it is possible that the kiln was constructed within an internal bank, rather than into the fill of the ditch itself.

The chamber was built into the southwest end of the construction pit. Its wall was fired hard grey to a depth of 20mm, and then merged, through a hard reduced clay, to an oxidised zone at least 0.06m thick; beyond this, it was noted that the clay was yellow and plastic. A single central pedestal, approximately 0.46m wide and 0.23m high, had Kiln 1 dimensions: Max length Max width Max depth Max diameter Construction pit been built in the centre of the chamber; the central core of the pedestal remained unfired and had slumped. A sherd of grey, reduced pottery was recovered from the wall of the kiln. This does not necessarily indicate a rebuild of the chamber, but could have been incorporated during the repair of its wall. It is possible that the kiln was totally relined on at least one occasion. The flue was comparatively short, but the preservation conditions do not rule out the possibility that it may have been longer. A section cut across the stoke-pit revealed three distinct layers: (1) a brown loam with some fired clay; (2) a grey loam; (3) a dark layer with a large amount of pottery and charcoal; also, fragmentary remains of oak charcoal were recovered. There were possible traces of an earlier stoke-pit in the form of a second hollow, but this was not properly investigated.

Kiln 1 dimensions:	Max length	Max width	Max depth	Max diameter
Construction pit	4.57m			
Stoke pit	2.44m			
Flue	0.38m			
Chamber	-	-	-	1.37m
Central pedestal	Max width: 0.31m; Max height: 0.22m			

Kiln Furniture – Thirteen firebar fragments were recorded. Their position did not suggest any clear pattern during excavation. The most likely arrangement would seem to be spanning the firing chamber from the wall to the central pedestal. However, this may be too simplistic an interpretation. The large wedge-shaped firebars, ‘D’-shaped in section, would seem to be too heavy to span the chamber, and may have been used on its floor in association with the elongated firebars. The central pedestal had collapsed, but it is unclear whether this occurred at the time of abandonment or subsequently.

Only a selection of the pottery from the kiln was kept after excavation, and subsequently quantified; therefore, it may not be truly representative, but slipped grey ware sherds found in the ash under the firebars show this to have been a Phase 2 kiln.

Kiln 2 – This was partly destroyed by mechanical digger, but was later found to be two separate kilns located near the corner of a paddock, whose ditches contain much large and unabraded waste from the kilns (Figs. 2.36–7). As noted already, the pottery from these kilns was not included in the computerised data-set, but was initially classified by

rim forms and briefly published in Jones and Rodwell (1973).

Kiln 2a (324N/610E; pub. ref.: Jones & Rodwell 1973, fig. 2, pl. IA; Rodwell 1982, 68, fig. 5.14 and table 1, 29; Swan 1984, MF 299) – The earlier Kiln 2a was constructed in a pit, and had been partly destroyed by Kiln 2b. The flue faced southeast, the chamber was pear-shaped, and c. 1.2m across. An ‘island’ of gravel in the centre revealed the position of a single pedestal, c. 270mm square; raking around this had caused a hollow to develop. The pedestal itself was not found and the kiln had been thoroughly demolished before the construction of the second kiln at the other end of the pit. All the identified charcoal was elm.

Kiln 2B (320N/617E; pub. ref.: JRS 1969, Vol. LIX, pl. XIII, Jones & Rodwell 1973, 15–17, fig. 2.II, pl. IA; Rodwell 1982, 68, fig. 5.15, and table 1, 29; Swan 1984, MF 299) – Kiln 2b was well preserved. It had been constructed in the stoke-pit of Kiln 2a, the earlier kiln being demolished and turned into the stoke-pit for the second kiln. This faced north; its chamber had a diameter of 1.2m and the structure stood to a height of 0.7m. The short, narrow flue survived intact and had been repaired using a complete *tegula*. A pair of rectangular-sectioned clay pedestals stood in the centre of the furnace. They were 0.28m high and relined with a bridging piece of fired clay. There was no ledge or scar around the kiln wall corresponding with the top of the pedestals, nor was there anything found to suggest the presence of a raised floor. All identified charcoal was of elm. The kiln flue was packed with sherds, with others also embedded in the kiln floor.

Around the kiln chamber and flue were a number of stakeholes that were interpreted as being constructional and that the stakes had been set into the kiln structure to hold a clay dome in place. The evidence does not, however, support this. It is more likely that some of the kiln was made of turf and that the stakeholes were to hold the turf-stack in place. Experimental kiln firings at the Alice Holt Forest between 1977 and 1980 have shown that turf stacks have a tendency to shift, and that there is, therefore, a need to stabilise the structure (author’s own findings).

The interior of the chamber ledge was apparently higher than the top of the pedestals. However, the pedestals may have been higher. The pedestals would certainly have aided stacking, but the absence of firebars does not preclude their use in stacking. The central pedestals were made of large lumps of clay, with both showing finger impressions. A lump of clay capped, at right angles, the top of the two pedestals (see [Fig. 2.36](#)).

The 0.15m-wide flue was well preserved; like the kiln’s pedestals, the sides were made of clay blocks. The weakest point of a kiln is the top of the flue arch. This had broken and been temporarily replaced

by a *tegula* placed over the top of the flue arch. The tile had also broken, and this may have been a deciding factor in abandoning the kiln, as it was often too difficult to repair the roof of a flue.

Kiln 3 (306N/639; pub. ref.: Jones & Rodwell 1973, 15–17, fig. 2.III; Rodwell 1982, 68, fig. 5.35, and table 1, 29; Swan 1984, MF 299) – This was constructed in a ditch south of the Kiln 2 complex (Figs. 2.37–8); it was aligned northeast– southwest with the flue at the southwest, and had been dug into a later recut of the RBII enclosure. It is difficult to interpret, as there seem to have been at least four different phases (it may even have been turned through 180°, with the butt-end of the ditch forming the original stoke-pit). The chamber in its final form was pear-shaped, with a tapering flue. There were two central pedestals, with a central ‘bridge’, as was also seen in Kiln 2B; the floor had already been fired when these were installed (this observed during final demolition). Two reddened areas in the chamber floor indicated an earlier pedestal. The chamber had a hard clay floor, with much pottery associated (presumably dumping of kiln waste to a height of 0.3m after the kiln had gone out of use) and concave walls at the base. The pottery recorded in the computerised data-set comprised 487 sherds (26.95 EVE), of mainly slipped and non-slipped grey wares representing a range of Mucking forms. Around the two sides of the chamber, at a height of 0.51m, ran a partial ledge. In the final phase of use there seems to have been a rebuild of the southern flue wall, identified through a distinct break between the mouth of the chamber and an overlap of the flue wall. This was only 0.1m thick, compared with the northern wall that was 0.15m thick. Identified charcoal comprised oak, elm and broom/gorse.

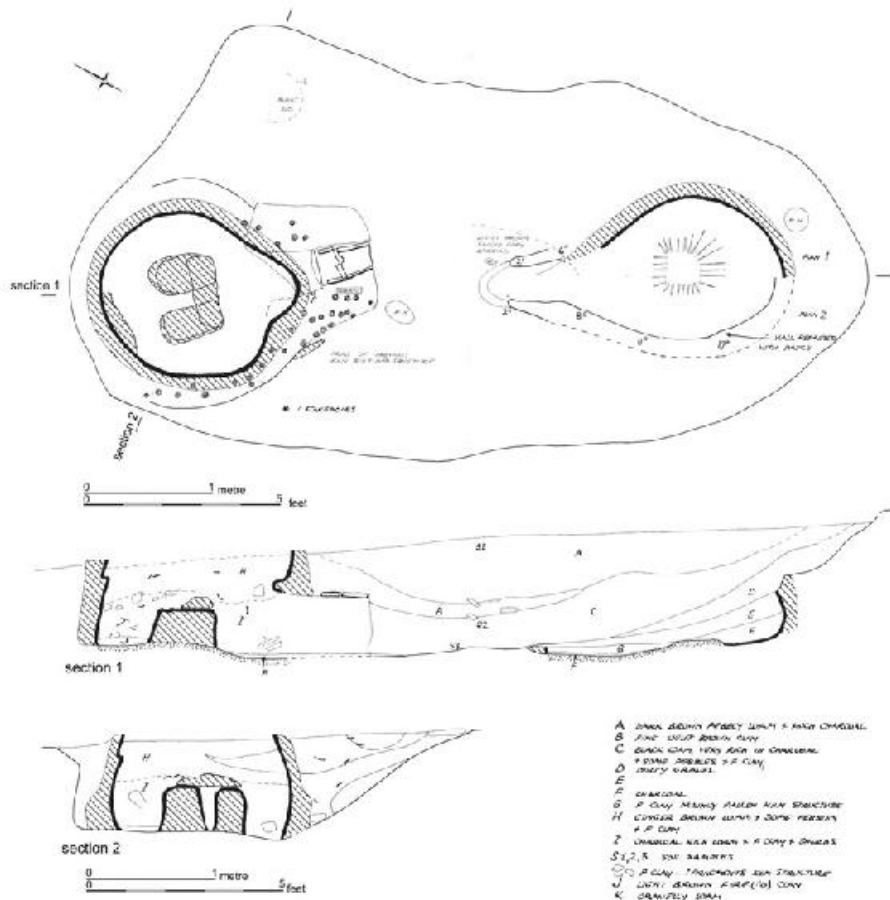


Figure 2.36. Plan, sections and photographs of Kiln 2.

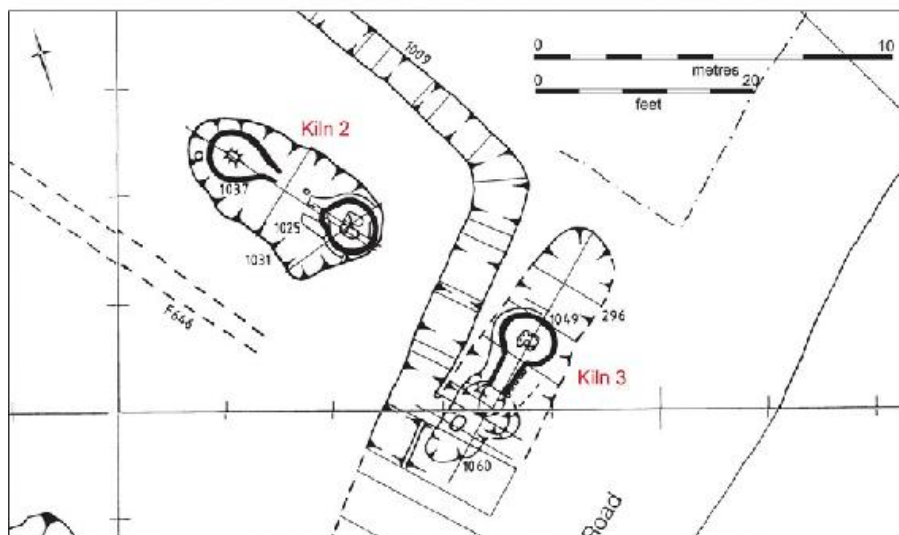


Figure 2.37. Photograph of Kiln 2 under excavation, with location base-plan of Kilns 2 and 3.



Figure 2.38. Photographs of Kiln 3.

Kiln 3 dimensions:		Max length	Max width	Max depth	Max diameter
Construction pit		-	-	-	-
Stoke pit		1.37m	0.36m	-	-
Flue		1.01m	0.61m	-	-
Chamber		1.47m	1.22m	-	1.47m
Double pedestal	(1)	Max width: 0.2m, Max height: 0.43m			
	(2)	Max width: 0.2m, Max height: 0.51m			

Kiln 4 (745N/370E; pub. ref.: Jones & Rodwell 1973, 15–17, fig. 2.IV, pl. I.B; Rodwell 1982, 69, fig. 5.34 and table 1, 29; Swan 1984, MF 299) – This was excavated between June and November 1969. Both the stoke-pit and the chamber were dug in quadrants using six-inch levels (15cm). At a depth of 0.76m, two quarters of the chamber excavation were combined and the lower part of the chamber was dug in two halves. At the end of the excavation of this structure, half of it was cut away for photography and the results featured in Jones and Rodwell ‘s 1973 paper (pl. I.).

The kiln was aligned northeast–southwest and was built near the corner of ditches F3 and F10 (Fig. 2.39). To the south and east of it were two further ditches (F8 & F7) which together formed a small enclosure, c. 16 × 12m, possibly for the kiln complex; pottery evidence, though, suggests that all these surrounding ditches may have been infilled before the kiln’s construction.⁶ A large amount of pottery was associated directly with the kiln feature: 4523 sherds are recorded in the computerised data-set (241.5 EVE), with a wide range of grey ware forms, some of which may represent kiln products. The lack of any later forms or fabrics suggests this feature had gone out of use by the mid to late third century at the latest. The stoke-pit of the kiln had been disturbed later by the construction of GH80, and a pit cut into the packing to the NNE of the chamber appears to be contemporary with the Anglo-Saxon occupation.

On the south side of the kiln construction pit were five postholes, with three more in the north and two on the west side. Their arrangement strongly suggests that the kiln was itself set under a roofed shelter of some kind: the only one at Mucking to be so protected.

Kiln 4 underwent at least two phases of reconstruction. It would seem likely that the chamber on at least the NNE side was completely rebuilt. A large storage jar sherd – a kiln product – was incorporated into the packing pit behind the chamber wall. This sherd cross-joins with others discovered in the kiln and could only have been introduced into the packing pit at a time of rebuild. There is no evidence for the dimensions for its primary form, but from the position of the pedestals it would seem to have been of the same size as the secondary kiln.

The surviving kiln chamber was roughly oval in shape and had been built against the loose fill of kiln waste that had fallen into the construction pit. It would seem unlikely that the kiln was originally built as a free-standing structure. The back of the chamber wall to the northeast was partly fired clay, oxidised to a depth of 0.53m. The lower part at the back was fired hard to a depth of approximately 0.1m; beyond this, the clay was still plastic to a thickness of over 0.18m.

As with Kiln 3, there was an internal ledge around the chamber, c. 0.38m above its floor, above which the chamber walls sloped in. Beneath the ledge the chamber walls were concave. There was a single pedestal centrally set within the chamber that survived to a height of 0.15m. Its sides were hard-fired but the top was plastic, implying that it had been broken off, and probably was once constructed level with the internal ledge. The floor of the chamber beneath the pedestal was also hard-fired. Traces of the primary kiln's pedestal were observable there. Unlike Kiln 3, the floor of the chamber sloped down to the west (i.e. from the rear of the chamber towards the flue mouth).

rectangular in plan, and cut into natural gravel. On the south side of the pit three possible steps were recorded, the uppermost being truncated by the construction of the later *Grubenhau*s. Neither the depth of the stoke-pit or the rise of the steps was recorded.

Fuel – Identified in large quantities was of elm, poplar, field maple, oak, hazel and broom/gorse charcoal.

Dimensions:	Max length	Max width	Max depth
Construction pit	5.64m	3.43m	-
Stoke-pit	3.05m	3.43m	-
Flue	0.46–0.61m	>0.3m	0.46m
Chamber	1.22m	0.91m	1.07m
Pedestal	0.53m)	0.61m	0.15m

Kiln 5 (550N/520E; pub. ref.: Jones & Rodwell 1973, 15–17, fig. 2.V; Rodwell 1982, 69, fig. 5.33, and table 1, 29; Swan 1984, MF 300) – This was first found by mechanical scraper in Easter 1969. It was noted that the eastern area was badly damaged by the machine. This makes interpretation difficult, particularly the relationship of the kiln to the surrounding ditches (Fig. 2.40). The stoke-pit had also been damaged by tree-roots; all this exacerbates the problem of this feature’s interpretation and assessment.

A ditch running east–west is shown on the plan butting Kiln 5, but this seems to be modern. Like Kilns 2 and 4, Kiln 5 was constructed in the angle of two ditches (F12 & F14), though these may have been infilled before its construction. The kiln was orientated northwest–southeast, with the stoke-pit at the north end of the construction pit. Unlike the other kilns, it was stated that Kiln 5 was constructed in brickearth, when in fact it probably lay at the junction of the brickearth and gravel.

At least one phase can be distinguished from the plan, although a photograph of the kiln in section shows an area of oxidised clay and reduced clay above and to the north of the flue arch. This may indicate a later kiln built into the earlier chamber and across the top of the earlier flue arch.

A Phase I pedestal can be identified in the chamber as a ‘hump’ of reduced fired clay, which was subsequently covered by the Phase II pedestal reconstruction. The single first-phase pedestal was placed centrally in the chamber, leaving a space of approximately 0.3m around it.

The flue was rectangular in section and narrowed to the north of the

stoke-pit from the north of the chamber. From photographic records it would appear that the flue retained a height of 0.61m throughout its length; however, it dipped steeply from the base of the pedestal to the stoke-pit; this properly related to Phase II only. The flue belonging to Phase I may have had a less pronounced slope originally and raking of ash may have lowered its front flow.

Phase II – This seems to have involved a total reconstruction within the chamber and flue of the Phase I kiln. The chamber walls were fired/reduced to a depth of 0.13m. The walls behind them were of soft plastic clay to a depth of c. 0.14m. The chamber's floor did not appear to have been lined with clay, although a thin skin of clay could easily disintegrate and leave no trace. The area of the chamber floor is recorded as being of fired sand, which is at variance with the notebook entry that records Kiln 5 as being cut into brickearth.

The Phase II pedestal was constructed over the stump of its Phase I processor. A clear demarcation line of hardfired grey clay can be seen in the photographic archive. The Phase II pedestal was reduced, hard clay on the exterior, but orange-brown oxidised clay inside. The pedestal had slumped forward down the sharp dip of the flue; this may indicate a degree of instability under the flue's floor at this point.

The flue is described as consisting of raw clay with slight firing on the inside of the flue. The Phase II flue lining has been applied in front of the Phase I lining, which appears as a skin of fired clay, with Phase II's being raw clay. Immediately above the flue was a hard layer of black earth. The centre-section of the flue floor was concave, and the thin skin of reduced fired clay that occurred on either side of the flue was there absent. This damage to the floor was probably caused by continuous raking over of the flue chimney.

The chamber of the kiln was approximately 1.4m long at the level of the floor. There was a c. 5cm-wide ledge around the interior of the chamber, at a height of 0.48m. At this point the walls had sloped in to 1.14m. The walls gradually sloped in further and, at their maximum height of 0.9m, the chamber was only 0.97m wide.

The stoke-pit sloped gently in from the side. A posthole was recorded at its north end; however, it is unclear whether this is contemporary with the kiln or later. After the kiln was abandoned, the chamber was used as a rubbish pit and it contained many fragments of bone, including a horse's jaw. The large pottery assemblage of 4855 sherds (259.1 EVE) had several grey ware forms represented, and suggests that the feature had gone out of use by the mid third century.

Phase I Structure

Dimensions:	Max length	Max width	Max height/depth
Construction pit	c. 6.7m	3.66m	-
Stoke-pit	4.27m	3.66m	-
Flue	0.9m	0.3–0.46m	>0.6m
Chamber	1.42m	1.12m	>0.91m
Pedestal (single)	0.3m	0.61m	0.08m

Phase II Structure

Dimensions:	Max length	Max width	Max depth
Construction pit	c. 6.7m	3.66m	0.99m
Stoke-pit	4.27m	3.66m	0.99m
Flue	0.91m	a) chamber 0.38m b) pit 0.25m	0.48m
Chamber	1.37m	1.02m	0.91m
Pedestal	0.61m	0.61m	0.33m

Fuel – Identified charcoal was mainly of elm, with some broom/gorse and ash also represented.

Kiln 6 (1092N/363E; published references: Jones & Rodwell 1973, 15–17, fig. 2.VI; Rodwell 1982, 27, fig. 5.11; Swan 1984) – This was built across ditch B27 ([Fig. 2.41](#)); its stoke-pit was cut into the ditch fill and the chamber constructed to the west. The kiln was oriented east–west, with the flue facing east. From the records it is unclear when the kiln was first identified, but it was fully excavated in August 1972. Although the records state that the chamber had to be dug in haste, it is not clear why this was necessary. The kiln chamber was quite well preserved, as was the flue arch. There is no clear evidence to suggest that Kiln 6 was rebuilt at any time, although it would seem likely that it was of two phases from the quantity of waste material behind the wall.

Although the kiln was relatively well preserved, the plans, sections, and notebook entries are not particularly informative, especially about its dimensions. The measurements given here are, therefore, best regarded as an approximation. The chamber of Kiln 6 appears to have been very similar to those of Kilns 2–5 (see above). Its floor consisted of reddened sand; however, since it was over-scraped, it is possible that a thin skin of fired clay may have existed on the pit floor. Two pedestals were placed slightly off-centre towards the middle of the chamber, c. 10cm apart. They had been broken off at the top and their original height is not known. The chamber wall was composed of reduced, hard-fired clay. As with Kilns 2B, 4 and 5, there was a c. 6cm-thick internal ledge to the chamber walls. It is not certain how high this was above the chamber floor, but it was probably in excess of 0.48m. Above this ledge, the kiln chamber sloped inwards to a height of approximately 1.14m. Generally, its profile was less bell-

shaped than Kilns 2b, 4 or 5.

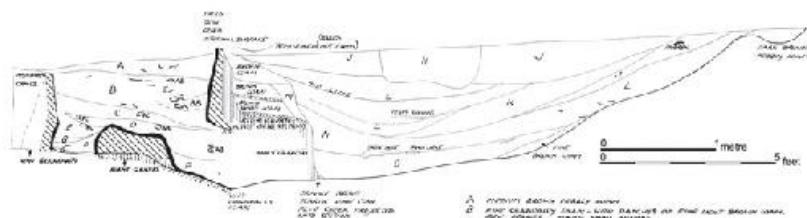
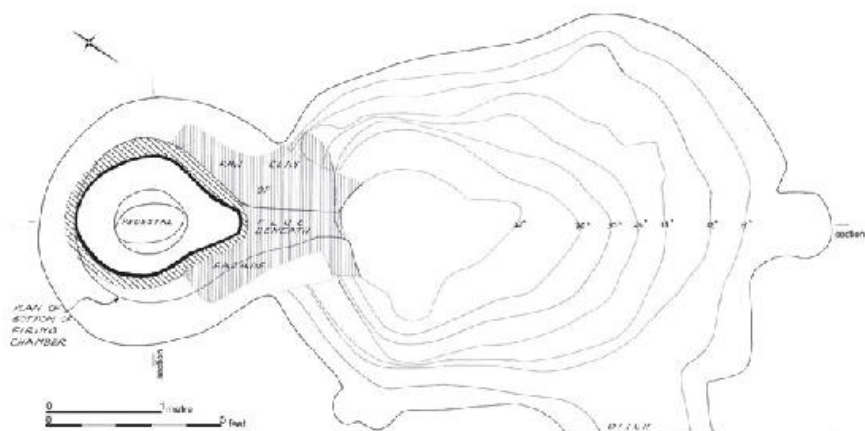
The kiln flue was quite well preserved, and unlike those of the other kilns. During excavation it was postulated that the chamber walls and flue were of two builds, and that the flue had been constructed in components, first the walls and then the roof. There seems little doubt, however, that both were of one build, but that the roof of the flue, which is one of the weakest parts of the kiln, had been damaged, removed and replaced, being clearly rebated into the structure.

Of more enigmatic character is the hole in the flue roof that led into the kiln chamber. The excavator interpreted this as a damper that would deflect heat from entering the chamber (i.e. as a control against overheating). There are, however, no known parallels for this in Roman kilns. The feature could have been used as an inspection hole to examine the state of the load, but it would certainly have needed plugging between each inspection. This is supported by the fact that the hole was only lightly fired on the outside, being hard fired on the interior. If the hole had been left open for any length of time it would certainly have had an adverse effect on the kiln load: a sudden inrush of cold air could easily have led to the destruction of at least part of the pottery charge. Another explanation is that the hole was caused by a large object, such as a stone or even a sherd, that had blown out during firing. Its precise purpose, if any, is unknown, but it is worth noting that pot sherds were recovered from the flue roof.

Fronting the flue was a 'lintel' of raw clay, rebated onto the flue's roof. This may have been part of the seal at the end of the last firing; in other words, used to close off the end of the flue (and probably the roof of the dome) once the firing temperature had been reached in order to allow the load to cool gradually.

The stoke-pit seems to have had two phases. Stoke-pit 1 appeared to have been shorter than its successor, which seems to have been enlarged by cutting back the eastern side of the stoke-pit. It is likely that, at this stage, waste material from the kiln was being shot into the hollow of ditch B27. Pottery from the kiln largely comprised vessels in shelltempered and grey ware fabrics, suggesting production from the later first or earlier second century into the later second to mid third century.

Dimensions:	Max length	Max width	Max height/depth
Construction pit	c. 3.5m	c. 1.83m	-
Stoke pit	c. 1.07m	c. 1.83m	
Flue	c. 0.6m	>0.36m	>0.3m
Chamber	c. 0.97m	0.91m	0.81m
Pedestals: A. NNE	0.23m	0.15m	c. 0.28m
B. SSW	0.28m	0.18m	c. 0.28m



- A. HEARTH AREA, FORMERLY HEARTH
- B. HEARTH AREA, FORMERLY HEARTH
- C. HEARTH AREA, FORMERLY HEARTH
- D. HEARTH AREA, FORMERLY HEARTH
- E. HEARTH AREA, FORMERLY HEARTH
- F. HEARTH AREA, FORMERLY HEARTH
- G. HEARTH AREA, FORMERLY HEARTH
- H. HEARTH AREA, FORMERLY HEARTH
- I. HEARTH AREA, FORMERLY HEARTH
- J. HEARTH AREA, FORMERLY HEARTH

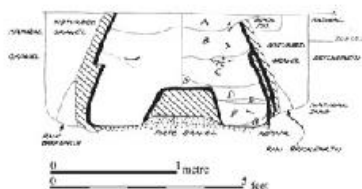


Figure 2.40. Plan, sections and photographs of Kiln 5.

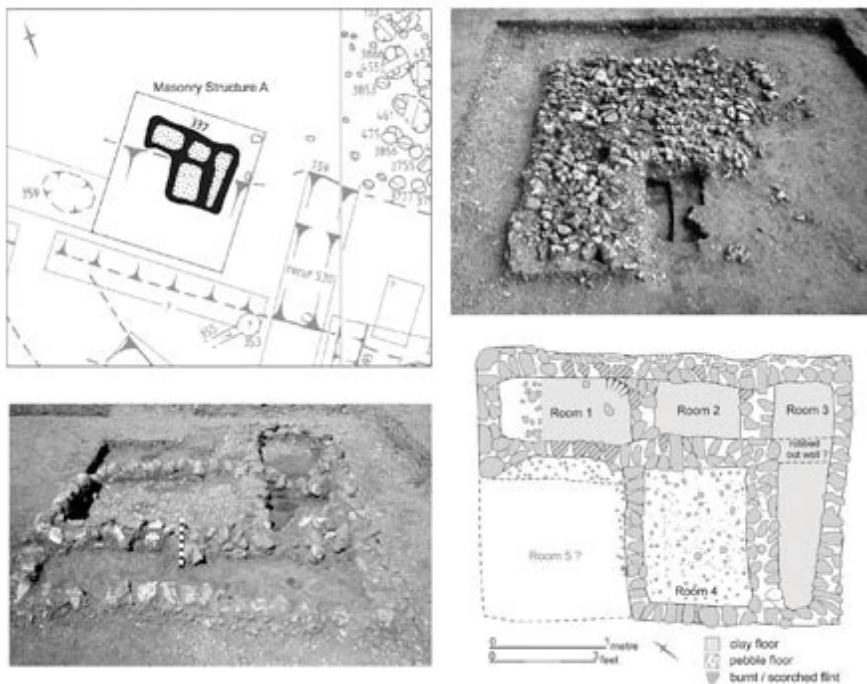


Figure 2.42. Plans and photographs of Masonry Building A.

Masonry Structures

The site's masonry structures, while apparently relating to agricultural processing (apart from Building A which may have been a kitchen), have the quality of 'fragments'. The robustness of especially Corn-driers 3/4 and their seemingly isolation, makes it difficult to interrelate them with the settlement's residential buildings (see Fig. 2.25 for locations); again, this conveys a sense of just how much went 'missing' as a result of the area's variable machining recovery.

Masonry Building A (prev. CD1; 176N/182E) – This was first identified during cleaning of the southern ditch of RBI in early November of 1966 (Fig. 2.42), when large flint nodules were uncovered. Parts of the northern area of the feature had been removed prior to further cleaning, but removal of 0.15m of soil revealed an area of large flints and smaller pebbles forming an 'L'-shaped setting, c. 3m by 2.4m. Further spreads of flints and pebbles were found to the north, in addition to evidence of a building trench and areas where material had been previously removed.

Removal of the upper layer of flints, up to 0.38m deep, exposed the building's floor-plan. The structure consisted of foundation trenches up to 0.28m deep, which had been lined with clay. Flint nodules and

large lumps of chalk were laid to create walls between 0.15m and 0.3m wide, surviving to a height of 0.18m; several nodules had been shaped into blocks, c. 0.3m long. The excavator noted that the majority of the flint had been fixed in place with clay, although this may have been degraded mortar. A sequence of small postholes was observed along the northern walls. Four rooms/cells survived (numbered, clockwise, 1 to 4 from the north), with possible traces of a robbed-out internal wall in the easternmost (Room 3). Room 1 measured c. 0.5m by 1.1m; Room 2, c. 0.5×0.66 m, and Room 3, c. 1.95×0.49 m (narrowing to 0.25m). Room 4 was rectangular, c. 1.23m by 0.82m, and had a pebble floor. This was laid directly on to the natural sub-soil. A fifth room was probably situated in the westernmost corner of the structure, but earlier robbing and disturbance has removed most of it, leaving only a narrow band of pebbles along the external margin of Rooms 1 and 4 (a spread of 'fallen' nodules was removed from that point during excavation). Within Rooms 1–3 the floors consisted of compacted clay that was laid after the walls had been constructed; the clay was confined to the floor-area of each room and did not extend under the wall sections (and was possibly re-laid on more than one occasion). There was evidence that the clay in these rooms had been subjected to heat, most notably in Room 1, but with scorched flint nodules found *in situ* in Rooms 1 and 2. In Room 1, the northern third of the floor-area had traces of pebble surfacing similar to that found in Room 4. Other construction material found during excavation included six pieces of *imbrices*, a possible *tegula* fragment and 19 pieces of non-diagnostic brick and tile.

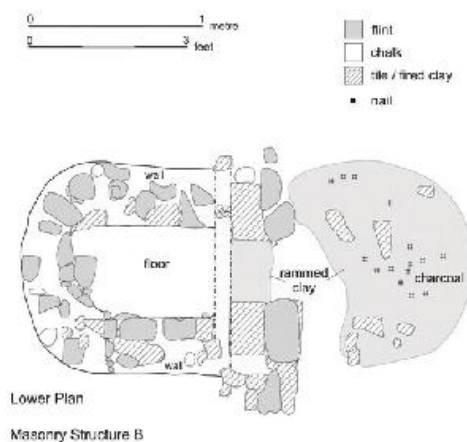
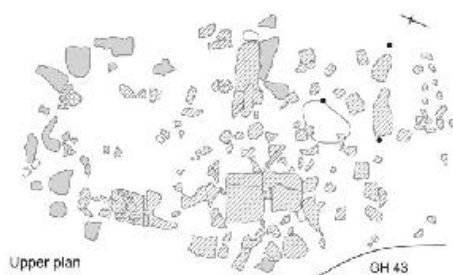
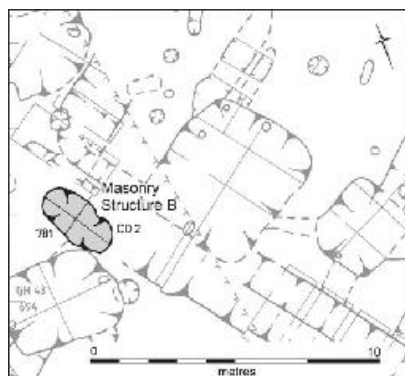


Figure 2.43. Plans and photographs of Masonry Building B.

Ascribing a function to this structure is problematic. The burnt clay floors evident in Rooms 1–3 and their configuration may have led to the early conclusion that this was a corn-drier, or similar, possibly for malting. The section drawing does not indicate that these were part of a flue, or that a stokehole was present. The small area of Room 4 argues against this being a drying or malting area, with the pebble surface unsuited to such use, although such a function cannot be entirely discounted (there is little similarity between this structure and ‘Corn-drier 3’ below; see also Morris 1979, for a discussion of the design and use of such structures). Of note is the lack of any charred cereal grains (although these may have been overlooked during excavation), as well as the quantity and variety of pottery recovered from the structure. Totalling 593 sherds (5.7 EVE), these included

flasks, flagons, beakers, bowls, dishes (mainly second-century products), storage jars and a sherd from a colander. In addition, three sherds of mortaria and at least nine sherds of samian were recovered, mainly dating from the mid to late Antonine period. The composition of the assemblage is indicative of food processing, storage and serving (Cool 2006); therefore, this structure may have been a food preparation area, located away from the main house or buildings, thus reducing the risk of fire and excessive smoke. With only one apparent phase of use, this may have been of relatively short duration, with the building having gone out of use towards the end of the Antonine period.

Masonry Building B (prev. CD2; 252N/411E) – Described as a ‘corn-oven’, this was located immediately outside and adjacent to the western corner of RBII Annexe (Fig. 2.43). Identified from a spread of pottery sherds, nails, *tegulae*, fired clay, flint, chalk, and disturbed on its southern side by GH43, this was excavated in three spits and initially thought to be a collapsed structure. Surface cleaning revealed an oval spread, c. $2.9 \times 1.55\text{m}$. The feature was divided into two bays or cells, with walling material (0.3m wide; surviving in places to a height of 0.15m) consisting of re-used *tegulae*, flint nodules, chalk blocks and layers of (rammed?) clay. In the northern bay, extending over $0.53 \times 0.84\text{m}$, a floor surface was formed from pebbles laid above three layers of clay (bright red, dark brown/red and dark red with charcoal). The southern bay was characterised by a 0.07m-thick layer of dark red clay, above which was found a spread of charcoal, fragments of *tegulae* and, at least, three iron nails. Associated pottery comprised 92 sherds of mainly second- to third-century grey ware jars, with a sherd of amphora.

Excavation and assessment of the feature suggests that construction began with the digging of wall trenches, subsequently lined with clay, with flint nodules and chalk used as foundation material and recycled *tegulae* as reinforcing and/or stabilising layers to provide level surfaces for further wall construction. The southern bay sloped towards the central wall partition, and it is likely that this small bipartite building was not a corn-oven or drier as originally thought, although its function remains unknown.

Corn-drier 3 (two buildings – CD3 & CD4; 50S/450E) – Excavated in three stages, the first of these two buildings was partially exposed during excavation of RBII as the area was in imminent danger of being lost to quarrying (Figs. 2.44–5). The southern part of the area had become highly compacted and metallised as this was the main quarry-access road, necessitating machining of the structure’s southern and eastern elements. Cleaning revealed a fired clay and chalk area, with

surviving elements of a possible wall-line and flue. This was quickly identified as a corn-drier, CD3. Further cleaning and excavation revealed a second floorarea, flint walls and a second flue. This was recognised as a similar building type to CD3 and subsequently assigned as CD4. The following text describes the buildings' layouts, relative phasing and stratigraphic relationship.

CD3 – Constructed above ditch RBII, this corn-drier was denoted by an external gully (3201 on the Atlas plan), 0.1m to 0.18m deep and 0.43m wide, with a light sandy brickearth fill. No structural postholes were found during excavation, but this feature was considered to be a wall or external barrier rather than a drip-gully. Interior to it, a roughly level area, up to 2.2m wide, was found. This consisted of a possible destruction layer of fired clay debris, c. 0.1m thick, separated from a floor of compacted clay by a thin band of charcoal. From the upper layer a number of long pieces of burnt wood were recovered. Cleaning and removal of this horizon also revealed several large spreads of charred cereal; these extended over c. $2.13 \times 1.0\text{m}$, with samples collected for analysis (van der Veen, [Chapter Three](#)). A small quantity of pottery and some nails were also recovered from the floor-area; the chalk floors of CD3 may be due to the collapse of the walls and upper structural elements, rather than being a laid surface as such.

The destruction debris contained a quantity of chalk blocks and towards the centre an 'L'-shaped flue structure, with a wall extension (3211), was exposed. Constructed from chalk blocks, the walls were 0.15–0.25m wide and survived in places to 0.25m in height (3206, 3207 & 3211). A stokehole, 0.96m in diameter, was found at the southern end of the flue, at the bottom of which was found a 'black, hard baked floor' and a charcoal-rich fill. The flue was c. 0.46m wide and 5.5m long (3205). At its closed end an upturned samian bowl was found ([Fig. 2.45](#)), a Drag 31 dating from the late second to early third centuries AD, with a stamp of MINVTVS (see Bird & Dickinson, [Chapter Three](#)). The flue's external walls were lined on the outside with clay (plaster?) and, up to 0.05m thick, were 1.23m long and survived to a height of c. 0.25m, with fired clay lining part of the stokehole's southeastern edge. Chalk blocks nearest the stokehole showed evidence of burning, with the floor of the flue also evincing heat-exposure (reddening); the flue's fill consisted of chalk fragments, fired clay and charcoal within a dark brown loam. A section of the northern wallline was missing, presumably robbed out as evidenced by the gully that bisected both structures (3301) and the small postholes (3303 & 3305) cutting the wall; traces of a possible southeastern wall-line were seen as soilmarks extending towards a small surviving ditch section (3218), but were extremely shallow.

Four body sherds and a rim/pedestal sherd were recovered from 3303 (most of the pottery from this structure was not, however, computer catalogued).

In the centre of CD3 was a rectangular chamber, with a chalk floor, 2.43m wide and c. 75mm thick. Around the wall-edge was a band of compact black ash and a channel 0.15m wide containing a reddened soil-fill. Overall, CD3 was c. 6.4m wide.

CD4 – Situated immediately to the northeast of CD3, this was severely truncated, so that only approximately a third of it survived. Although laid out to the same design and alignment as CD3, it was constructed from different materials. The external wall was between 0.28 and 0.38m wide (3230). The surviving floor-area (3224) measured up to 1.75m from the chalk wall-line of CD3 (3211) to the flint wall of the flue (3223), and consisted of compacted clay (in places reddened) laid directly onto the natural brickearth; only a narrow strip of clay floor survived in the northeastern part of the structure (3227). ‘U’-shaped in plan, the flue’s walls (3221 & 3222), up to 0.3m wide, were built of flint blocks and only survived along its western side (up to 0.25m high); there was no evidence of any *in situ* flint blocks along the remaining length of the flue. The stoke-hole, which measured 0.94m across, was similarly situated to that of CD3. A number of (uncatalogued) Romano-British pottery sherds and a large sandstone block were recovered from the flue’s entrance. The flue’s excavation exposed a large volume of ‘raw clay’ (plaster?) and a basal layer of grey ash. Only a few sherds of grey ware pottery were recovered from the fill, in addition to a number of fallen flint blocks.

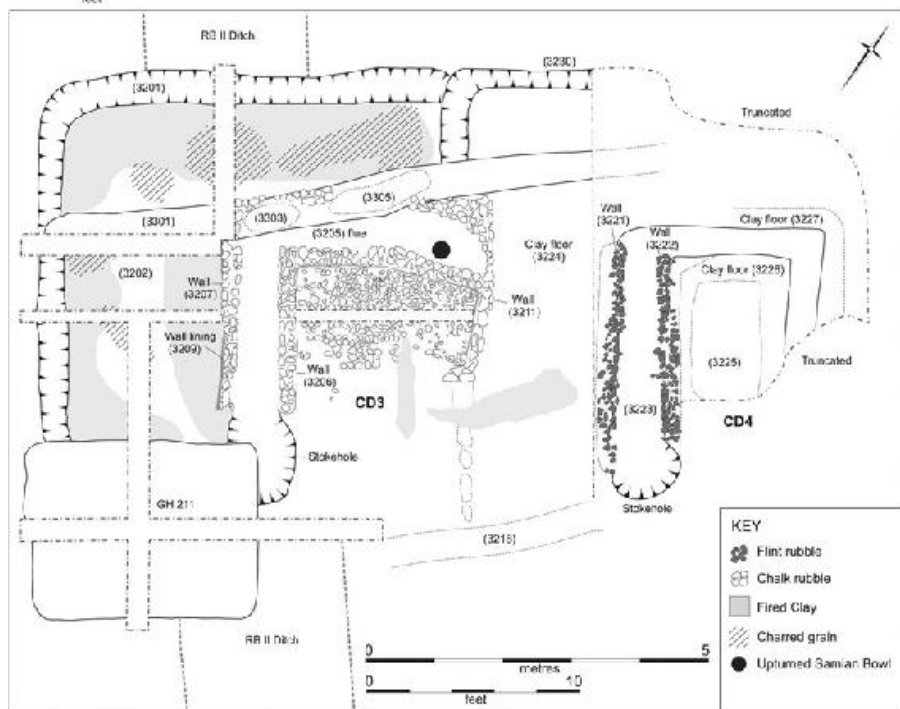


Figure 2.44. Plans and photograph of Corn-drier 3/4.

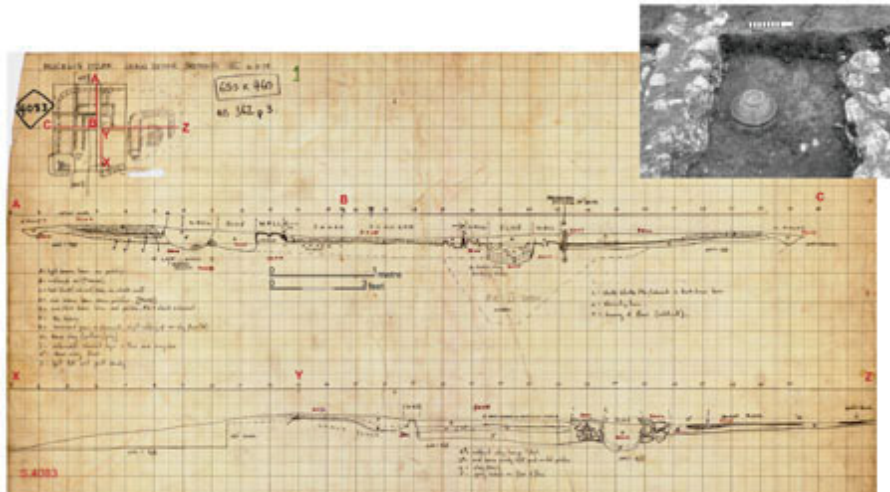


Figure 2.45. Section through Corn-drier 3/4, with photograph of inverted samian bowl in situ in flue inset.

The central ‘room’ or chamber was severely truncated toward the southeast corner, with only a narrow band of yellow/grey clay found around the inside edge (3226), up to 0.35m wide. Inside this band was a spread of burnt floor material (3225), c. 1.25m wide and 0.07m thick, whose removal uncovered a further layer of unburnt clay material. No finds were recovered from this area. Overall, the surviving elements of CD4 were more minor than CD3, but it would have been of similar dimensions, if only slightly smaller, when first constructed.

Phasing of these two structures is affected by the area’s severe disturbance, in part due to the truncation of CD3 in its southwest corner by GH211, plus also the later disturbance of the southeast quadrants of both buildings due to the quarry-access road. Despite this, four phases can be identified (excluding the truncation of CD3 by GH211). The first consisted of levelling an area over RBII and an east-west oriented ditch (3213; 0.61m wide by 0.3m deep), followed by laying raw clay over the area. Although the relationship between both corn-driers was somewhat obscured due to later wall-robbing, CD4 – the ‘flint corn-drier’ – was constructed before CD3, its outer wall

(3230) having been cut by the outer wall (3201) and flue of CD3 (3206 & 3207). The second phase consisted of the construction of CD3, with additional clay (3202) being laid over the outer wall of CD4, the use of different building materials and by building to a slightly different configuration. The third and final phase saw the buildings go out of use and a robber-trench (3301) cut along the line of the earlier east–west ditch (3213), presumably to extract both flint and chalk blocks from the corn-drier’s flues. It is interesting to note that the excavators, although establishing the stratigraphic relationship and phasing between the builds, were unable to determine if CD4 had gone out of use or was still functioning when CD3 was constructed.

The construction technique used for these two structures conforms to known examples (Morris 1979), with arched flues probably built from the same material as the walls in each. There was no direct evidence from either structure as to whether there were any baffles to control the heat and penetration of flames from the stokeholes, although these may have been robbed out. Similarly, any upper or suspended floor elements may also have been removed, either during demolition or robbing. The function of corndriers remains open to considerable debate and several uses have been proposed, including drying of cereals, flax and preparation of malt (*ibid.*, 5–12). As van der Veen observes (1989; see also Chapter Three), a reconstruction of the almost identical structure at Foxholes Farm (Hertford), along with experimentation, showed that it was unsuitable for cereal drying; further experimentation demonstrated, though, that it was suitable for the preparation of malt. The large quantity of wheat and sprouted grains recovered from CD3 would support this interpretation and could suggest that brewing was an important activity at Mucking during, at least, the later second and early third centuries AD.

Phase 3 – *Mid Third to Fourth Centuries AD*

As mentioned in this chapter’s introduction, it is difficult to come to terms with the site’s Late Roman usage. As attested by its feature-based sequence, it seemed that its occupation had effectively ceased by the mid to later third century AD. Yet, as detailed below, a considerable quantity of fourth-century coinage and pottery was recovered, the vast majority of this material deriving from the site’s Southern

Enclosures. Much was recovered from the upper profiles of major cut features there – such as RBI's eastern perimeter and the so-called 'Antler Ditch' – with a substantial amount occurring within Anglo-Saxon *Grubenhäuser* (see [Chap. 3](#)). Indeed, focussing at first on specifically 'Late' Roman wares within the latter, we for some time maintained that there was a hiatus in the Roman sequence. Yet, it was eventually recognised that this flew in the face of both the site's coin evidence and, also, its quantities of generic later Roman pottery types (e.g. Nene Valley and Much Hadham; this being in addition to the occurrence of Anglo-Saxon pottery within Wells 7 & 8). In the end, therefore, while there was certainly a marked decline in the settlement during the later third and fourth centuries, occupation appears to have continued over that span within the area of the Southern Enclosures. This evidently saw few if any major developments (newly established ditch systems vs. remnant-earthwork usage). It nevertheless has to be admitted that we have been unable to adequately come to terms with its stratigraphic expression (as opposed to demonstrating continuity through finds distributions); as outlined in [Chapter One](#), this is largely attributable to the extent of damage from quarry-works across much of that part of the site.

Here we will detail one feature, the aptly named 'Enigma'. Seemingly a 'real' dug hollow – perhaps relating to gravel and/or brickearth extraction – whilst its original digging may have been earlier, its infilling assemblage was clearly mixed' and included later Roman material.

Finally, as outlined in [Chapter Five](#), it is possible

that Kilns 4 and 5 may have still functioned into this phase.

The Enigma

Centred on 384N × 506E, excavation of this 'pond-like' feature or hollow, dubbed 'the Enigma' (cut 15852), commenced in August 1968 having been identified as a circular area, approximately 8m by 7m (Fig. 2.46). The feature was identified following machine scraping of the area, the quantity of pottery observed on its surface and a distinctly different soil colour to the natural. Excavated using 18 Wheeler-type boxes on a grid, each 1.83 × 0.91m, the edge of the hollow was found to be diffuse and the overall depth somewhat shallow (0.3–0.38m). The feature sloped gently in a generally southerly direction, possessed a flat base and contained at least five fills:

15847 - brown pebbly loam with some fired clay, pottery and iron objects.

15848 - a layer of clean sand found towards the northeast of the hollow and as dirty sand in the northwest.

15849 - basal fill for much of the feature consisting of mixed black to dark grey pebbly loam with mixed fired clay (daub) overlain in the east central area by charcoal.

15850 - fired clay lumps (daub) and raw clay forming a clear deposit at the southern edge.

15851 - a largely charcoal rich basal fill that was mainly found towards the southeast and similar to the secondary charcoal fill of pit [1145].

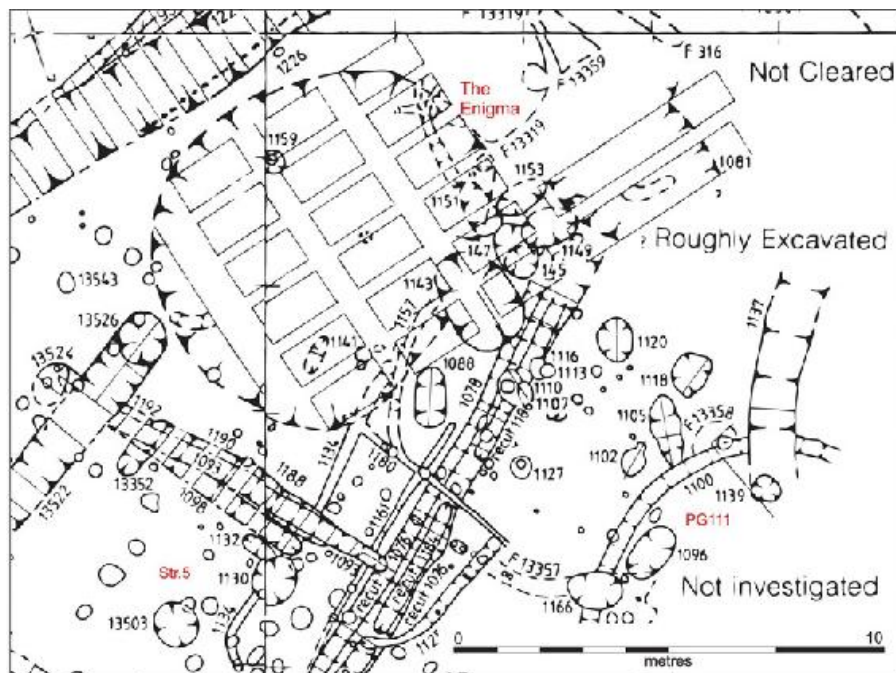


Figure 2.46. 'The Enigma': detailed plan and, below, photographs of the feature's 'Wheeler Box-style' excavation (see [Chap. 1](#), Note 3).

Table 2.2. Finds from the Enigma.

Category	Min. No./wt.	Category	Min. No./wt.
Samian	47/ -	Tegulae	2/25g
Pottery	24/-	Imbrex	2/70g
Mortaria	9/-	Brick	5/1180g
Amphorae	4/-	CBM	52/5880g
Coins	Nil	Structural daub	21/2280g
Copper alloy	3/4g	Fired clay	69/1684g
Iron	49/-	Spindlewhorls	3/-
Lead	1/9g	Fire bar	1/50g
Animal Bone	75/-	Quern	3/-
Glass	2/-	Worked stone (chalk)	4/-
Beads	2/-		

Cutting a narrow gully (1157), the southeast quadrant of the Enigma was disturbed by a cluster of pits (1143, 1145, 1149, 1147 & 1153) and had a large posthole or pit situated towards its northern edge. The precise stratigraphic relationship between some of the pits and the Enigmahollow itself was unclear; pit 1145, for example, contained a basal fill of raw clay, suggesting it may have been prehistoric in origin.

Numerous artefacts were deposited or disposed of within the Enigma ([Table 2.2](#)), including the Mars pipe-clay figurine and a relatively high quantity of samian, pottery, mortaria and ironwork. The iron consists primarily of nail fragments, but also included a riveted sheet, strips and binding, cramps, a possible pruning knife, handles and stem from a tool and a hobnail. The samian dates predominantly to the Antonine period (cups, beakers, bowls and dishes represented), with the pottery mainly of second and third century date, with a sherd of Mayen ware attributed to the fourth century; there were also two sherds of Oxfordshire red wares and possibly three sherds of Much Hadham pottery. Only three pieces of copper alloy (scraps, a finger-ring and possible tweezers) and a piece of lead of uncertain function were recovered, in addition to two glass beads and shard identified as from a jug. Also recovered was a quantity of structural daub (detailed by P. Drury in NB 57.70), fired clay and tile (five tile fragments are recorded as having a signature on them, but it has not been possible to verify this). Interestingly, only two pieces of residual worked flint were identified from the feature.

Despite this evidence of the site's generic later Roman usage, the question of its Late(st) 'Roman' utilisation still directly reflects on the character of its earliest Anglo-Saxon occupation. This raises issues that can

only really be addressed following presentation of the settlement's artefact assemblages in [Chapter Three](#). Its possible resolution is only feasible within the volume's final chapter, following the presentation of the site's cemeteries in [Chapter Four](#).

Discussion – Settlement Sequence, Pits and Building Parallels

For the same reasons as outlined in the preceding section, any significant overview of the site's Romano-British settlement sequence must await the presentation of its artefact assemblages and the incorporation of the cemetery data. Accordingly, while outline patterns will here be briefly summarised, at this juncture discussion will largely be confined to the period's pits and building types/structural parallels.

Pits

Phasing of the site's large number of pit-like features identified 265 non-prehistoric pits. These could be attributed to the Iron Age/Romano-British period (86) and Late Iron Age/Romano-British period (16), with the remaining 163 pits generally attributable to the Romano-British phase of occupation. These figures should, however, be considered as minima due to the large number of inter-cutting pits/postholes, truncation and pit-like features devoid of datable artefacts. Where possible, pits were classified into four size-categories:

- A) Up to 0.8m in length/diameter and 0.25m in depth
- B) Between 0.8m and 1.39m in length/diameter and between 0.24m and 0.54m in depth

- C) Between 1.4m and 2.99m in length/diameter and up to 1.2m in depth
- D) Over 3.0m in length/diameter.

Due to excavation conditions and inconsistent recording 93 pits were apparently only recorded in plan and 74 pits (unclassified; Unc.) were recorded as containing artefacts, but lacked further information. Summary date by phase and category is provided in the following tables ([Tabs. 2.3–5](#)). Of note is that 137 pits attributable to the Romano-British phase (84% of the total for that phase) contained pottery (and where quern was contained within these pits it was of Romano-British type). The profiles and shapes of these features varied from steep to shallowsided with flat and/or concave bases. Only 31 pits contained more than three fills, with information on the number of fills from 145 pits of the overall total not recorded. Where recorded, fills consisted mainly of brown to greyish brown clays, with 21 pits also recorded as having one or more distinct layers of clay lining. Possible pit functions are varied, but might comprise quarrying (particularly in the brickearth areas), storage, and excavation specifically for rubbish disposal.

Table 2.3. Pits category by phase.

Type/Phase	IA/RB	LIA/ER	RB	TOTAL
A	11	1	23	35
B	28	3	57	88
C	28	2	26	56
D	1	3	8	12
Unc.	18	7	49	74
TOTAL	86	16	163	265

Table 2.4. Number of pits containing artefacts of various types.

Artefact type/phase	IA/RB	LIA/ER	RB	TOTAL
Pottery	81	16	137	234
Coin			2	2
Bronze	4		4	8
Iron	8	1	18	27
Quern			9	9
Bone	3	1	8	12
Tile		1	14	15
Daub	4	1		5
Loomweight	3		3	6
Slag	6		7	13
Belgic Brick	3	1		4
'Cramp'	3			3

Table 2.5. Pit categories and artefact groups.

	A	B	C	D	Unc.	TOTAL
Pottery	31	81	47	11	64	234
Coin		1	1			2
Bronze	1	1	5		1	8
Iron	3	13	5	1	5	27
Quern	3	1	1	1	3	9
Bone	1	6	2	1	2	12
Tile	4	2	1	1	7	15
Daub		3			2	5
Loomweight		2	2		2	6
Slag	2	3	5	1	2	13
Belgic Brick	1	1	1		1	4
'Cramp'	1		1		1	3

Structures

Several different Roman-phase structural types were identified at Mucking. Along with at least five roundhouses, a 'granary' type and other beam-slot structures, two successive phases of a large aisled post-building, and an apsidal-ended range were excavated, along with a number of more ephemeral buildings of less certain design. There were also the masonry buildings, two of which were identified as malting floors. Many of these structure types can be paralleled at other settlement sites, which can throw some light on the status and function of Mucking's buildings.

Aisled Buildings

Located in the middle of the Central Enclosure, two successive large post-buildings, Structures 2 and 9, were respectively assigned to Phases 1 and 2. These seem to belong to a class of building often present on rural settlements in Roman Britain, and are usually interpreted as aisled buildings. Comprising five or six pairs of large postholes, these structures rarely display any sign of their external walls (it being assumed that the posts acted as aisle-posts in supporting the main weight of the roof, with weaker external walls providing a framing). They tend to measure 10 to 13m in length and are 5–8m wide (measured from the centres of the aisle posts), with the building as a whole presumably being larger in extent (Fig. 2.47). Examples are known from many sites (see e.g. Hadman 1978 and Taylor 2007, 33); with examples from Essex and Kent being discussed below, these otherwise include Kilverstone, Norfolk (a second-century structure; Garrow *et al.* 2006, 111), Brandon Road, Thetford (Atkins & O'Connor 2002, 10) and Melford Meadows (Mudd 2002, 21). All of the latter are associated with rural settlements, and interpreted as barns. Simple aisled structures such as these generally have a long axis twice the length of the short axis, and where traces of outer wall have been observed, the nave is usually twice the width of the aisle (Hadman 1978, 189–90). For the two structures at Mucking, this would imply overall widths of 8m and 11m (with internal nave widths of 3.9m for Structure 2 and 5.5m for Structure 9). In the absence of

any internal features such as hearths or corn-driers, these structures are thought to have been primarily used for livestock, with stalling constructed in the putative aisles, and with there being provision for fodder and grain storage (*ibid.*, 192).

These structures should probably be distinguished from the more formal aisled barns now identified on a number of major villa sites, such as at Chignall, Essex (Fig. 2.47.9; Clarke 1998, 29–30, fig. 19) or Thurnham, Kent (Booth *et al.* 2011, figs. 5.26 & 5.29). Indeed, occasionally these form the original core of a later elaborated villa building. In those cases, the structure still had the twin rows of roof supports and a central open nave (Smith 1963; Morris 1979), but then saw further elaboration. This could include internal subdivision, porticos and wing-rooms, and even suites of private rooms, and the addition of hypocausts, bath-houses and mosaics (Germany 2003, 220). Building 416 at Great Holts Farm, for example, saw many such elaborations, with private rooms, a portico, a bath-house and two wing-rooms (*ibid.*, 33–40, 220–1). In total, this measured 27m by 15m, and its internal supports (with an aisle 6.4m wide) were more closely spaced than in the more ‘agricultural’ type of aisled building. Its total extent was defined by a surrounding wall trench (with some internal postholes visible). This structure appears to have been built in the later third or fourth century, and was accompanied to the northeast by a similar contemporary structure (Building 368; c. 24 × 12m), also with an external wall-trench, but with six pairs of major internal postholes in a parallel alignment (*ibid.*, 41–5, 220–1). The two buildings were separated by a bath-house, and Number 368 may have been used for more domestic or agricultural functions. Yet, another contemporary structure – Number 294 – set in the corner of the same enclosure and probably aisled, had strong evidence for use as a granary; it had been gutted by fire and its postholes produced a range of cereal macrofossils (*ibid.*, 56). In contrast, superseding and partially incorporating earlier elements of a conventional villa-block plan, the final phases of Kent’s Northfleet Villa was marked by the construction of two enormous aisled ranges, the one measuring 13 × 39m (Fig. 2.47.10; Andrews *et al.* 2011, 164–73, fig. 3.26).

The Mucking structures present a direct contrast with these elaborate structures, even if they probably employed aisle-posts as a key architectural feature. These buildings should probably be regarded as barns, rather than anything of higher status. That said, the replacement of one by another suggests that they occupied an important functional role within the settlement, perhaps one related to agricultural processing.

The Apical Building

Located in the northeastern part of the Central Enclosure, Structure 7 was apparently a double-walled rectangular post-built structure with an apsidal western end. Aside from a small quantity of second-century pottery, just nails and other pieces of structural ironwork were associated, with the outer wall being termed a 'palisade' during excavation, implying it was a 'closed' feature. Intriguingly, its closest parallels are seen at a number of other Essex sites: the structure at Site A at Sandford Quarry, Hatfield Peverel (Ecclestone & Havis 1996), the 'apsidal ditch' at Ivy Chimneys (F3203; Turner 1999, 41–5, 246) – interpreted as an early fourth-century temple compound – and the early to mid second-century 'enclosure' 67 at Wendons Ambo (Hodder 1982; thought, though, too large to be a building). Comparison of their plans demonstrates that these are broadly the same size, with one apsidal end beyond an internal division (Fig. 2.47.1–3). Against this, though also having a quasi-rounded southwestern end, the primary simple range-form of the Northfleet Villa was a massive structure: $11.5 \times 36\text{m}$ (Fig. 2.47.8; Andrews *et al.* 2011, 138–41, fig. 3.5)

As an architectural feature often associated with churches, temples and high status administrative buildings, the use of an apsidal end in itself suggests something out of the ordinary. While the finds evidence from Structure 7 itself would not point to anything 'special', its form might indicate that it was used for particular administrative or social functions. Its construction is problematic. It is rather wide to have been a timber-framed structure with no internal or external supports. Although a number of internal postholes were excavated, these were mostly associated with the subsequent Anglo-Saxon structure there (PHB37) and no obvious pairs of aisle-posts were visibly associated with the Roman building. One possibility is that the internal and external gullies – both associated with stake- and postholes – acted as the framing for a more substantial walling (perhaps brickearth, turf or cob walling). Structure K at Newgate Street, London (Perring *et al.* 1991, 14–15), dated to the later first to early second century AD, could provide a possible parallel, having a brickearth wall in part (with internal stakeholes inserted during a rebuilding phase) and an external timber-lined gully and drain; another wall was of brickearth-infill between regularly spaced posts (cob construction was also proposed for some of Gorhambury's structures; Neal *et al.* 1990). One oddity is that the internal gully has apparent entrances that were not mirrored in the external wall; perhaps a two-phase building process is represented here, or access to storage space within the walls.

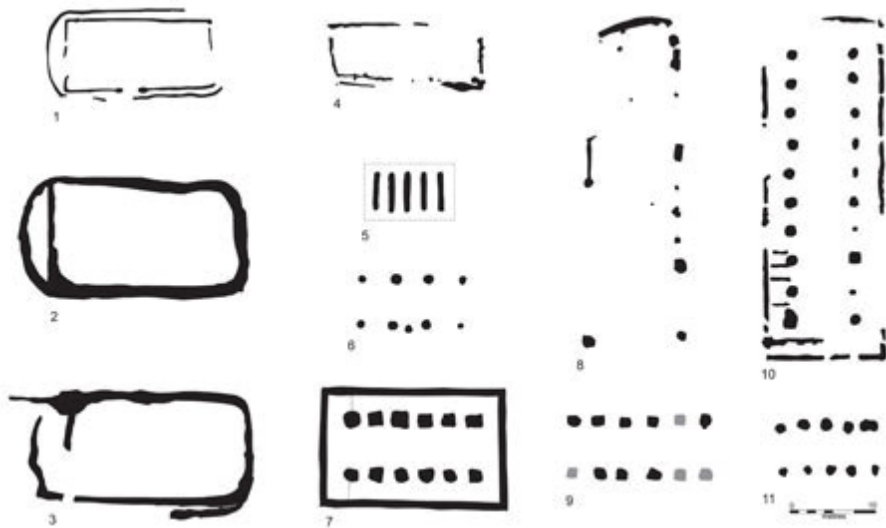


Figure 2.47. Comparative plans of aisled and apsidal buildings (not to north): 1) Mucking, Structure 7; 2) Ivy Chimneys, ?temple (Turner 1999, fig. 5); 3) Sandford Quarry (Ecclestone & Havis 1996, fig. 5.1); 4) Mucking, Structure 10; 5) Mucking, Structure 1; 6) Great Holt Farm, Building 294 (granary; Germany 2003, fig. 41); 7) Thurnham aisled barn (Booth et al. 2011, figs. 5.26); 8) Northfleet Villa, Phase 1 (Andrews et al. 2011, fig. 3.5); 9) Chignall, Structure 4 (Clarke 1998, fig. 19); 10) Northfleet Villa, Phase 4 (Andrews et al. 2011, fig. 3.26); 11) Mucking, Structure 9.

While based on its plan alone no definite function can be suggested for this structure, its location near to the main entrance into the Central Enclosure could indicate a role as a principal reception for visitors, and perhaps a main residence of some status. The similar structure at Ivy Chimneys was thought possibly to have been the site of a temple (Fig. 2.47.2; Turner 1999, 41); though this remains a possible interpretation for Mucking's building, this seems most unlikely. It is also the probable candidate for the building represented in the destruction deposit within the upper fills of Well 4, and the significance of this will be addressed below.

Granary/beam-slot Structures

Two structures were of parallel beam-slot construction: the Phase 1 'granary' within the Central Enclosure (Structure 1; Fig. 2.47.5), and the nearby Phase 1/2 Structure 8, overlying PG68 within the fenced plot (see e.g. Fig. 2.3). Although Structure 1 was identified at the time as being of a distinctly 'military' type (Manning 1975, 129, fig. 9),

more recent excavations have demonstrated that this form of parallel beam-slot construction is found on a range of different sites, both military and civilian, and its presence can no longer be argued to necessarily represent military involvement. (As mentioned above, rather than involving ground-fast sill-beam trenches, the granary associated with the villa at Great Holts Farm, Essex – Building 294 – was apparently raised on eight large uprights: Fig. 2.47.6; Germany 2003, fig. 41, 49–50.) Mucking's Structure 1 does, however, seem to have been a storage facility, albeit a relatively small one compared with examples known from a number of villa sites (*cf.* Morris 1979, fig. 29). The five beam-slots, like other similar structures, appear to represent an attempt to raise the building's floor level, thereby allowing air to circulate underneath; they contained 'ghost' posts, indicating a raft-type construction. This would be appropriate for a structure designed to store grain, for example. It may be of significance that this structure was located in the Central Enclosure.

The two parallel beam-slots of Structure 8 are less easily interpreted, and all that can really be determined about this structure is its floor-area. Having vague affinities to Chignall's Structure 3 (Clarke 1998, 24, fig. 15; see also e.g. Evans *et al.* 2013, Structures 6, 7 & 60, 239–41, fig. 3.37), it may not have amounted to anything other than a shed. Yet, given its seemingly direct replacement of a round building (PG68) that was arguably associated with the fenced plot's 'reserved ground', some manner of minor shrine-like setting is conceivable; it would, though, have to be one lacking any votive finds deposition.

Roundhouses

A number of roundhouses were present both in Phases 1 and 2, and represent continuity of this structure type from the later Iron Age and before. A number of sub-types are represented (Fig. 2.48). Within the Western Enclosures, Conquest Period/Phase 1 examples include PGs 56, 58 and 78 (with integral large four-post structures), as well PG65 and the unusual PG75/76 setting. Again, the finds shed little light on the possible functions of these buildings, although grain storage must be a possibility by analogy with other four-post structures at least for the first three of these. A recent parallel from the nearby Stanford Wharf site (although much larger in diameter than those from Mucking) has similarities with the later first-century signal tower at Westerton in Perthshire (Woolliscroft & Hoffmann 2006, 73–114; Biddulph *et al.* 2012, 168, fig. 6.62); the size of the Mucking examples, however, strongly suggests a more prosaic storage function.

Based on its small diameter and paucity of finds, PG75's circle might have done no more than encircle a haystack. Yet, set centrally

within PG76's rectangular gully setting – with roughly aligned entrances – it is possible that together these constitute some kind of minor shrine setting. Again, though, like Structure 8 this would have been without any obvious accompanying votive deposition.

Set within B31's ovoid enclosure, and with their entrances coinciding, PG65's gully is thought to represent a roundhouse proper (the off-centre four-poster within its interior being of earlier, Iron Age date). The few finds that were recovered from them would indicate their Roman date; their paucity, and the enclosure's plan, could suggest that these functioned as a sheepfold or the like.

Of particular interest is the sequence of roundhouses located just inside the Central Enclosure's fenced plot: PGs 68 and 73 of Conquest Period/Phase 1 attribution, and PG71 in Phase 2. Little survived of PG68, and PG73 had been heavily truncated by PG71, so finds evidence was not very informative; their phasing was based largely on their orientation matching the better-dated double-ringed PG71. The latter, in contrast, contained a substantial finds assemblage: 586 sherds of pottery, including some samian and amphorae; a number of lava quern fragments, probably all from the same quern, and a large amount of structural ironwork (nails and fragments). No prehistoric pottery was recorded from this feature, and it is definitely of Roman construction. Of most significance in the interpretation of these roundhouses is that their entranceways coincided with the line of the fenced plot (Figs. 2.2–3), their entrances being marked by more substantial postholes.

The large Phase 2 roundhouse, PG71, is closely paralleled by Building S9 at Orsett Cock, although the latter is phased to the Conquest Period to later first century AD (this date would, however, be appropriate for the roundhouses preceding PG71). The substantial outer gully of S9 was interpreted as being more than just an eavesdrip gully (it was capable of holding more than a month's rainfall), acting as a sump or soakaway, diverting moisture away from the building's foundations (Carter 1998, 121; Allen *et al.* 1984, 91). The same could be true for PG71, where the inner gully appears to have acted as the wall trench; this structure is substantially smaller than that at Orsett. Other parallels from Essex are Little Waltham C2 (Drury 1978, 32) and Lofts Farm (P. Brown 1986). Roundhouses dating to the mid Roman period are now known from Strood Hall (Timby *et al.* 2007, 111), although these were rather truncated; survival of such structures after the end of the first century is recognised as rare in Essex (*ibid.*), although late Roman examples are now known from Stansted Airport (Cooke *et al.* 2008, 161, 174–5, fig. 8.16) and are also documented outside the region. At Higham Ferrers in Northants., for example, substantial stone-footed roundhouses of second- to third-century date

are known (Lawrence & Smith 2009). Apparently similar features from nearby Stanford Wharf were salterns of third-century or later date (Biddulph *et al.* 2012, fig. 6.14).

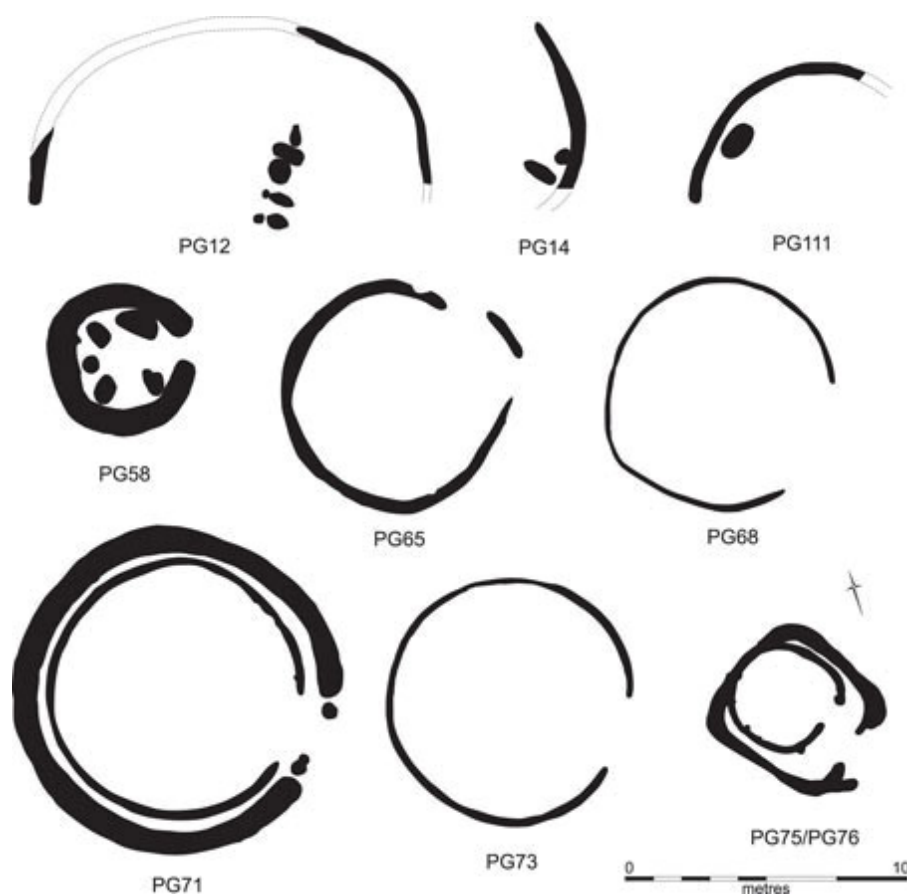


Figure 2.48. Plans of Romano-British roundhouses at Mucking.

Yielding relatively few finds, though each seemingly of Roman date (and here all assigned to Phase 2), three roundhouse ‘fragments’ – PGs 12, 14 and 111 – occurred within the Southern Enclosures; their function is unknown.

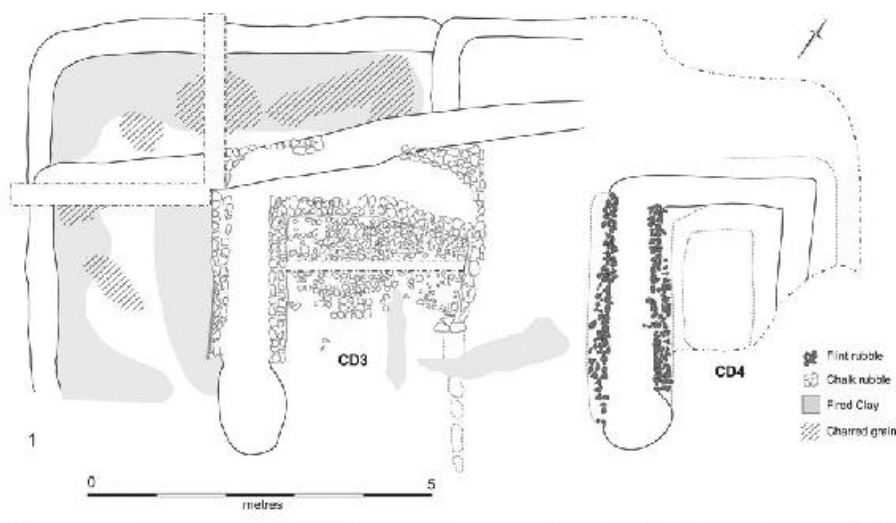
Other Timber Structures

A range of other timber structures was also recognised and assigned to phase: ill-defined Structures 3, 4 and 5 in the Phase 1 Southern Enclosures and, in the same area, Phase 2 Structures 10, 11, 12 and 14 (see e.g. Andrews *et al.* 2011, fig. 2.28 on the wide variety of

Springhead's rectangular timber buildings). All were probably post-built and rectangular, employing combinations of wall-slots and postholes. All have suffered from the hurried excavation in that area, and finds assemblages are little help in assigning functions to these. One further interesting point to note is that of the many post-built structures assigned to the Anglo-Saxon occupation (*cf.* Hamerow 1993), relatively few produced Anglo-Saxon material from their postholes, whereas Romano-British pottery was forthcoming from several. While this could easily be residual or curated, the automatic equation of rectangular post-built structures with Anglo-Saxon activity could now be questioned; some of these structures could easily be Romano-British, by analogy with more recent excavations (e.g. Colne Fen: Evans *et al.* 2013; Stansted: Cooke *et al.* 2008, 174, fig. 81.5). That said, these Anglo-Saxon-assigned buildings generally show a consistency of alignment, which did not match the Roman system's layout.

Masonry Structures

The structure termed 'CD1' during excavation (now Masonry Building A, and reinterpreted as a possible kitchen structure; [Fig. 2.42](#)), produced a range of pottery (5.7 EVEs, 591 sherds), together with the copper alloy dress pin, structural nails and other iron fragments, as well as a tool (a punch), and fragments of quernstone. The pottery included fragments of at least three samian vessels: a Drag 31 dish, a probable Drag 38 bowl and a Walters 79 platter, while the other forms mainly comprised grey ware jars and dishes, with small numbers of flagon, beaker and bowl fragments (many in London Ware). A colander fragment was also associated. No significant animal bone was, however, associated, and in the absence of any environmental data, it is difficult to assign a definite function to this structure.



²
Figure 2.49. Comparative plans of corn-driers: 1) Mucking; 2 & 3) Orton Hall Farm, respectively Periods 4 and 5 (Mackreth 1996, figs. 49 & 51).

The role of the structure termed ‘CD2’ (now Masonry Building B; Fig. 2.43) remains more ambiguous, but there is no evidence for it having been a corn-drier or malting floor. The most immediate regional parallel for the definite malting floors, CD3 & CD4 (Fig. 2.49), would be the Northfleet Villa’s malting oven (Andrews *et al.* 2011, 184–5, fig. 3.24 & pl. 3.16); also in Kent, the Springhead complex had a crop drier (*ibid.*, 30, fig. 2.29; see Taylor 2007, fig. 7.3 for distribution of Roman corn-driers). Although unlikely to be a direct parallel as Mucking’s terrace-top locale would be ill-suited for salt production *per se*, a tile-built hearth associated with a slattern at Stanford Wharf (Fig. 5.17; Biddulph *et al.* 2012, 127–31) would appear similar to some of Mucking’s masonry builds.

Attention should be drawn to the fact that the Southern Enclosure Structures 10 and 12 would have been impressive buildings, and that others of comparable type/build probably went unrecognised within that portion of the site. Indeed, there is some basis to think that the solid-wall construction technique postulated for Structure 7 may have been more widespread. Although in no case is the evidence certain (and possibly just reflective of rebuilding), Structures 10, 12 and 13 all have one of their sides 'doubled' like Structure 7. In fact, given its plan, Structure 12 might also have been quasi-apsidal-ended. Based, therefore, on its plan Structure 7 need not have been especially different from the rest of the settlement's main residential buildings. What distinguishes it is the fact that it was the sole residential structure within the Central Enclosure (and that it may have been the source for Well 4's backfilled assemblage).

Roman Mucking definitely saw both 'long' post- and trench-built residential structures and roundhouses. Of the latter, particularly significant is PG71. Rendered in a construction tradition that, in its essentials, could just as readily have been of Middle/ later Iron Age date, the quantities of material from it leave no doubt whatsoever of its Roman attribution (see Taylor 2007, fig. 4.7 for distribution of Romano-British roundhouses). Indeed, some of its finds seem of relatively high status. Given all this, its association with the fenced-plot is without ready explanation: does the material recovered reflect general enclosurewide clearance and, as such, is it equivalent to Well 4's assemblage; alternatively, was it a priest's

house or the like?

Site Sequence

A degree of planning is certainly apparent in the regularity of the Central Enclosure's large rectangle (Phase 1). Equally, the regularity of layout of the earlier 'small paddocks' along the northwestern side of the subsequent Southern Enclosures also seems to reflect a degree of formal planning. This could possibly reflect a short-term military presence and relate to what appears to have been a reinvestment of the RBI Enclosure. It is unfortunate that our understanding of the site's Conquest Period amounts to little more than a sketch. As indicated in [Figure 2.1](#), there is the suggestion of a highly organised arrangement involving continuing usage of Prehistoric Cemetery V beside the settlement's main crossroads and potentially bordering a planned or reserved open space (?market).

By the later first century AD (i.e. Flavian times), all of the settlement's main components had been established. Pottery production, as well as perhaps ironworking, occurred within both the Western and Southern Enclosures. While a few residential buildings were associated with the latter, none were identified as relating to the Western Enclosures. Although it may by then have been an industrial quarter (which could accord with the absence of any identified wells), the evidence of RB Cemetery V could be enlisted to dispute this; it is always possible that structures may have gone unidentified amid its many unattributed postholes and short slot lengths (this also being true of the Southern Enclosures).

The Central Enclosure was obviously the focus of the settlement's large-scale agricultural activity, and by the later first century all of its facilities were in place (serviced by Well 4): Structure 2's aisled barn, Structure 1's granary and Structure 7. As has been alluded to above, there are grounds to infer that Structure 7 was the source of the wealth of material recovered from Well 4's backfilling/closure and, therefore, would have been a higher status residence. By the scale of agricultural activity evinced, it is reasonable to assume that this relates to some manner of estate-based production, which may have also extended to the site's pottery industry. Given this, it seems likely that Structure 7 was then the domicile of the estate's overseer and their family.

Though, as defined here, Phase 2 was marked by a degree of change – Structure 9 replacing Structure 2's barn (with new buildings occurring in the area of the Southern Enclosures) and the establishment of the Central Enclosure's outer perimeter – this largely involved a contraction of settlement. The early second century seems to have seen the end of activity in the Western Enclosures and probably much reduced usage of the northern half of the Southern Enclosures paddocks, if not abandonment. Whereas occupation and pottery production continued within the latter until the third/fourth centuries, by the mid to late second century the Central Enclosure seems to have largely ceased in its functions. There are, though, hints of later activity there: the pitting within the fills of its northern ditch-line and, especially, the quantity of later second- and early to mid third-century pottery within the upper fills of Well 6. The quantities of this

later material within the area of the latter could, in fact, suggest that something has been ‘missed’ there, as no associated structures were recovered.

Therefore, rather than positing a settlement development model, what Mucking’s Roman saw was essentially *settlement retreat*. This was into the site’s southeastern corner and along its eastern edge, basically back into the area of the gravel/brickearth interface. This is where its main cluster of wells lay and, again, this highlights the importance of dependable water supply.

Finally, three further observations can be made. The first relates to what seems to be the clustering of buildings along the western side of the RBII portion of the Southern Enclosures, with their density being such that one can talk about their frontage along the RT2 track/roadway there. This attests to an intensity of usage/occupation that can easily be overlooked given the damage wrought by the quarry-works across much of that area (see e.g. [Fig. 1.13](#)).

The second observation pertains to the general layout of RBI and how (if leaving aside the complications of its sequence) at a basic level it was similar to the Central Enclosure. Not only is this a matter of their three-sided concentric perimeters (with neither ‘doubled’ on their north sides), but also that they both housed the site’s most impressive Roman buildings: respectively, Structures 10 and 7. It is too easy to underestimate the potential importance of RBI’s compound at this time, due primarily to the area’s evidently hurried and only partial excavation.

The last point concerns a theme that will be further

developed in this volume's final chapter: the marked stand-off between the settlement's main enclosures, especially that of the Central Enclosure from both its Western and Southern counterparts. Given what seems to be the relatively diverse activities associated with the settlement's various parts – as well as their attendant cemeteries – this seems *a distinctly componented place*.

Notes

1 A note on measurements and feature enumeration: the imperial system used in recording the site has, for the most part, not been retained in feature descriptions. Though site co-ordinates are given in feet and inches (as are also spit-level depths), generally within the text the dimensions of features are in their metric equivalents. Where applicable both feature labels assigned in MPX and context numbers assigned by the BM/EH post-excavation phase (and visible on the *Site Atlas*) are given, to enable reference to both the published site plans and the data archive.

2 Within the site's sequence there are a handful of fourposters that might conceivably have been of Roman attribution. All much smaller and less robust than the Western Enclosure's gully-set ones, these have negligible dating evidence. The most crucial of these was Four-poster 47, which seemed to truncate one of the main Phase 1 granary's beam-slots (Structure 1; see Fig. 2.8). While potentially suggestive of a marked decline in grain storage-capacity, it is thought unlikely that the fill of such a minor posthole would have been distinguishable as cutting into a much larger feature (i.e. the granary's beam-slot). This relationship could well have been confused and the four-poster was probably of pre-Roman date. This is also thought true of three other settings arranged between the Central Enclosure's western inner and outer circuits; in such proximity to its ditches – especially the interior – they simply could not have functioned. It should though be acknowledged that similar four-posters have been attributed to Conquest Period/Early Roman phases on other sites (e.g. Booth *et al.* 2011, table 5.2).

3 Although opening onto the projected line of FL2 (its trough not actually surviving that far to the north), PG/ Roundhouse 77 was certainly of Iron Age date, with the more than 190 sherds

recovered from it assigned to the 'earlier' Middle Iron Age (see Prehistory Vol. chap. 4). Given this, it is likely that its relationship with FL2 was coincidental.

4 See Andrews *et al.* 2011, 154–6 and 163–4, figs. 3.11 & 3.21 on the timber construction of Northfleet's c. 2.25–3.45m deep wells.

5 See Figure 2.1 on which these correlate with Enclosures 26–9.

6 Based on the quantities of later Iron Age finds recovered from this immediate area and that ditches of that date seem to converge at this point, within the Prehistory Volume this gully-/ditch-setting is considered to be of later Iron Age date and was there assigned as Enclosure 14.

Settlement Finds

Given the scale and obvious significance of Mucking's Romano-British assemblages there really is no option but to present the material in traditional categories, in the first instance. Yet it is essential that key feature/building-structure assemblages are reassembled and considered contextually, thereby allowing issues of specific household and/or enclosure function and status to be addressed. Accordingly, along with discussing site-wide distributions, this will be attempted in this chapter's final section, at least in relationship to the site's well deposition. That section will also include an appraisal of the impact of the site's subsequent Anglo-Saxon occupation upon the Roman assemblages (as well as discussing the site's latest Roman/earliest Anglo-Saxon 'interface').

The challenge of integrating the settlement's assemblage-data with the evidence of their contemporary cemeteries (e.g. grave-good representation) will have to be left to this volume's final chapter. Having so much material and requiring integration and comparison between the site's many

Roman 'parts', finding the means to appropriately structure and 'stage' such complex analyses is crucial. (Note that in the text below illustrated finds are indicated with an asterisk.)

Metalwork

By the measure of most Romano-British rural settlements Mucking's metalwork assemblages, especially its ironwork, are certainly impressive. That said, the number of the period's coins (113) is relatively low when compared to more recent excavations, and must reflect the lack of any metaldetecting.

Roman Coinage Richard Reece

The Roman coins from Mucking include many examples which show clearly the acidic nature of the sub-soil through their heavy corrosion and pitting. Other examples, particularly from the first and second centuries, have surfaces worn almost flat. Since these coins show little corrosion in general it seems as if they had a long life in use but, since the wear is often heavier on the reverse, this may not be due to normal economic coin use. The combination of corrosion and wear means that many of the identifications are tentative. One way of recording this would be to give a detailed account of how much of each inscription survives and how much is lost. Since it is unlikely that the published version of this small group of coins will be extensively used by numismatists an archaeological approach has been adopted by which the most likely identification has been given with a mark of

uncertainty (“?” or “as”) added. References are given to either RIC (Mattingly, Sydenham and others, *Roman Imperial Coinage* Vols I to X, 1923 ff) or HK and CK (Carson, Hill & Kent, *Late Roman Bronze Coinage*, 1960; HK part 1, CK part 2).

2 Claudius I	as, Minerva Copies (2)
4 Vespasian	as, reverse illegible (4)
1 Titus	RIC (Vespasian) 786
1 Nerva (?)	Sestertius, reverse flat
7 Trajan	RIC 492 (COS uncertain), 500 (COS uncertain, 2); Sestertius reverse flat (1), figure standing left (1), missing (1); as reverse illegible
7 Hadrian	RIC as 586 details uncertain, 754; Sestertius reverse flat (1); Dupondius or as reverses flat (4)
4 Antoninus Pius	RIC as reverse as 566, 685, 934 (2)
2 Faustina II	RIC (Ant Pius) 1395, as reverse illegible
2 Marcus Aurelius	RIC 981, Sestertius reverse standing figure with legend ? TRP XXVIII
1 Commodus	RIC 501
3 First or second century	Sestertius of Empress AD 40–140 otherwise uncertain, reverses illegible (2),
1 Early third century	Core of plated denarius

1 Geta	RIC 20
2 Gallienus	RIC as 159, 226
5 Postumus	RIC 83, radiate Sestertius with reverse flat and pitted, radiates otherwise uncertain (3)
2 Claudius II	RIC 14 (?), 16
3 Victorinus	RIC 57, 78, 110
2 Tetricus I	RIC 79, otherwise uncertain
1 Tetricus II (?)	Radiate reverse as RIC 280
1 Carausius	as RIC 121 no mm in field
3 Barbarous Radiates	Copy as Tetricus I RIC 130, copy as Salus; copy as Tetricus II Pax
296–317	
1 Constantine I	as RIC 6 London 108
1 House of Constantine	RIC 7 as London 10
317–330	
2 Constantine I	RIC 7 London as 225, 289; Trier 461
1 Crispus	RIC 7 Trier 347
2 House of Constantine	RIC 7 London as 10 (?), as 292 (?)
330–348	
1 Constans	HK 138
1 Theodora	HK 113
2 Urbs Roma	HK as 51 mm off coin, 58
3 Constantinopolis	HK as 52 mm off coin, as 52 possibly with overstrike copy mm illegible, copy as 52 HK as 137 (?)
1 House of Constantine	HK as 137 (?)

348–364	
1 Constans	CK as 35 mm illegible
3 Constantius II	CK as 35 mm illegible, as 256 pierced (2)
5 House of Constantine	CK copies as 25 (3), uncertain copy (1), minim (1)
1 Magnentius	CK as 19 mm illegible
1 Julian	CK 695
364–378	
5 Valens	CK 82 (Trier), as 97 mm off coin, as 280 mm off coin but OF II, 570, 1416
1 Gratian	CK as 503 mm off coin
1 House of Valentinian	CK as 275 mm corroded
388–402	
1 Arcadius	CK as 566
1 House of Theodosius	CK as 796
23 Corroded	Broken fragments otherwise illegible

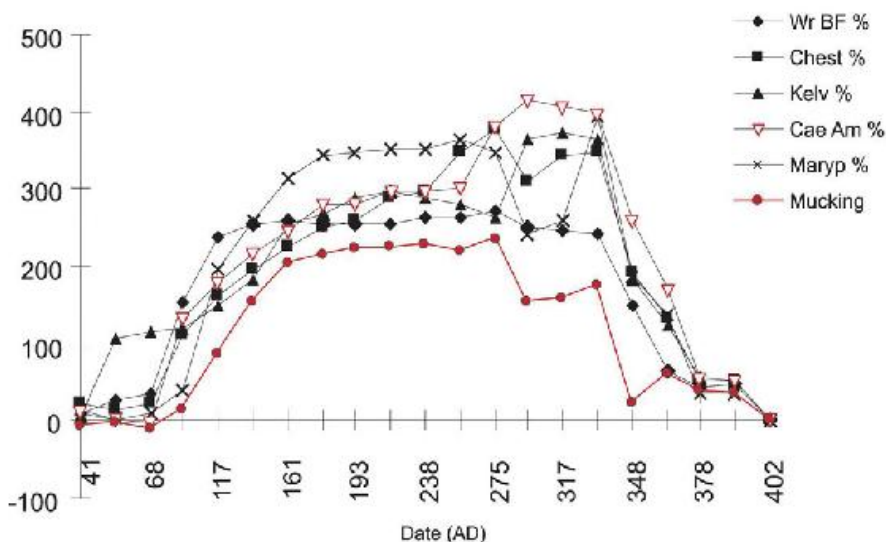
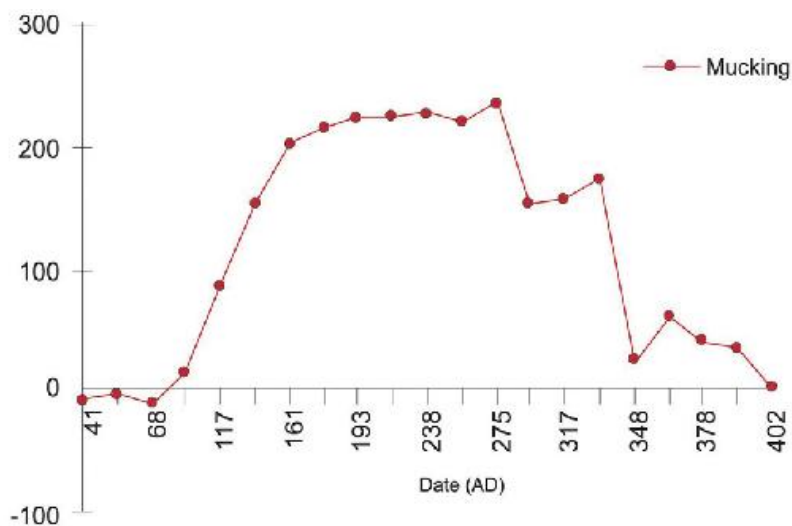


Figure 3.1. Profile of adjusted site coin numbers as Reece (1995; top); below, Mucking's coinage profile against comparative sites.

It has been noted above that several of the earlier coins showed the reverse worn flat. When the list is put in chronological order these are more obvious in the years before about AD 160, as after that the coins show less wear. This could mean that all the early coins, with the exception of the Claudian copies,

entered the site after AD 160, having been well used up to that time, with the newly issued coins of AD 160 to 210. But against this is the point that many of the earlier coins are Asses: a type that seems to have dropped out of circulation in the later second century.

The coin list in general is odd because it seems to show a very steady supply of coinage to the site throughout the Roman period. The more normal pattern (Reece 1995) is one that shows clear peaks and troughs with special focus on the periods AD 260 to 296 and AD 330 to 348. Coins from these periods have been found but they do not form peaks.

If the coins are divided up into the usual periods and plotted in diagrams described in Reece 1995, then the result is [Figure 3.1](#)'s upper plot. If the profile is then compared with the other sites discussed in Reece 1995, the result is that shown on that figure's lower plot.

The coins from Mucking show a concentration in the earlier periods, compared with most other British sites, and this accounts for the steep rise of the profile. It is similar to the profiles of some of the military sites such as Maryport, Caerleon and Chester, and of sites that changed from military establishments to towns such as Wroxeter. The exception on the site-comparative plot is the small town of Kelvedon in Essex, which suggests that in the Essex region settlements could share in the military coin pattern without being actual military encampments in themselves. Presumably the coins from military sites moved quickly to the settlements that supplied the military markets. The relative rarity of later coins, again, as compared with most other British sites is

something common to early military sites and, presumably, the service settlements that relied on them for business. Distributions of coins of different dates are examined in the discussion section at the end of this chapter (see [Fig. 3.32](#)).

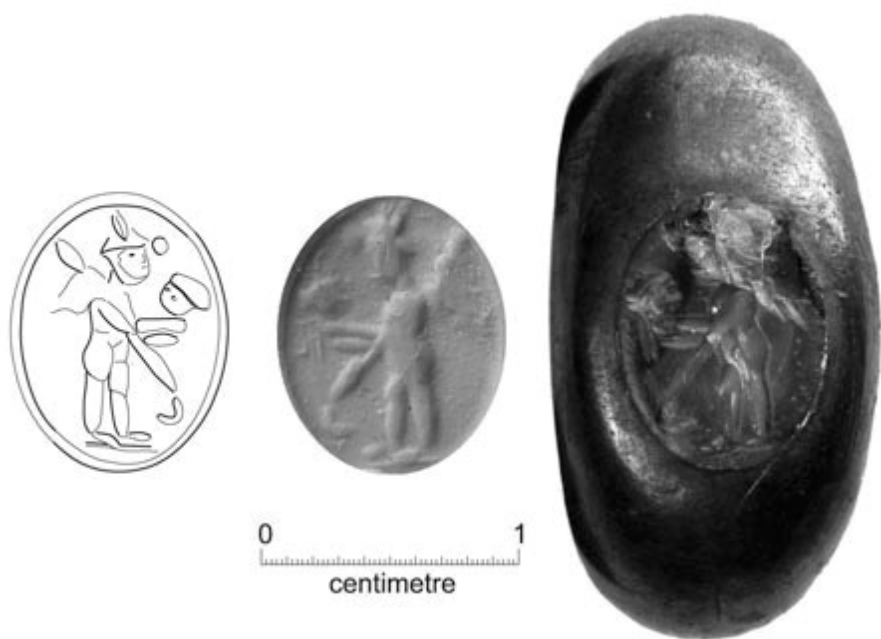


Figure 3.2. Intaglio from the silver finger-ring.

Base Silver Finger-ring Martin Henig

The ring (Silver 3; Lab. 785; 562'3N/299'6E, ditch, Level 1, NB 57.32) can be dated to the later second century (Henig 1974–2007, no. 116).¹ Externally it has a somewhat convex profile but internally it is flat, unlike rings of the early empire that have a more nearly circular section. The span from shoulder to shoulder is 24mm (18mm internally) and the depth is 20mm (16mm).

There are similar silver rings from Rhostryfan,

Caernarvonshire (National Museum of Wales, Cardiff acc. no. 23 88/6, Williams 1923, 104–6 and fig. 12); Caerleon (site museum; Lee 1862, 69 and pl. XXXV, 13); Kenchester (Hereford Museum acc. no. 4439) and Colchester (Castle Museum acc. no. 234.38, Hull 1958, 193).

It is set with an oval cornelian intaglio (10 × 7.5mm) that, although scratched and chipped in two places, is still in fair condition (Fig. 3.2). It even retains some of its original shine on the surface and within the area of the cutting, which indicates that the ring may not have been worn for too many years before it was lost. The subject is a cupid standing to right, naked (save for a little cap on his head) and looking at a comic mask that he holds in his left hand. In his right hand he carries a crook (pedum).

The modelling of the figure is poor and the details, for example the facial features of both cupid and mask, are summarily executed. Nevertheless the stone has some interest, as it would appear to be the only occurrence of this particular figure type in Britain. A number of similar renderings on intaglios are, however, recorded in the major collections (although for the most part they show the tip of the pedum pointing upwards), e.g. Furtwängler (1896) nos. 1596–8 (glass), 8202 (nicolo); Walters (1926) no. 2900 (glass); Sena Chiesa (1966) no. 291 (onyx: the original identification as cupid burning a butterfly is wrong; compare with Steiger 1966, no. 10 and pl. 8, 11); no. 336 (red jasper) depicts cupid with the pedum curving downwards as on our stone; however cupid here holds some sort of vessel instead of a mask. A further example comes from Vindonissa (von Gonzenbach

1952, 70, no. 21): the material is pale orange cornelian.

Roman gems show cupids performing a large number of actions and engaged in a wide range of activities. The iconography of intaglios depicting cupids is, indeed, remarkably varied.² In this instance the pedum and mask are to be regarded as attributes of the wine-god Bacchus and there are intaglios from Corbridge and Caerleon depicting a satyr, or perhaps Bacchus himself, holding a mask and pedum (Henig 1974–2007, nos. 153 and 154). The connection between cupid/cupids and Bacchus/satyrs in their fertility aspects is obvious and is reflected by the number of gems which show cupids holding bunches of grapes or playing with masks (frequently of the old satyr Silenus).³ It is typologically more advanced than second-century specimens with narrower hoops, for example those found in Slay Saltings, Medway Marshes, Kent (Marshall 1968 [1907], nos. 1164–6) associated with coins down to M. Aurelius, and which ultimately developed into the massive ring-type with carinated shoulders that characterises the third century (*cf.* the gold ring from Sussex in the British Museum (*ibid.*, no. 550).

***Roman Brooches* Colin Haselgrove**

The excavations yielded a sizeable assemblage of brooches spanning the period from the fifth century BC to Anglo-Saxon times; those of Iron Age and potential Conquest Period date are reported on in the Prehistory Volume, leaving 15 to be reported on here (Fig. 3.3). Definitely Anglo-Saxon brooches are excluded, but given the regular presence of earlier

objects in early medieval contexts, it is not always possible to assign a date to some typologically longlived categories of brooch (e.g. penannulars); those of Fowler (1960) Type C have therefore been included here. A number of the brooches were published in the Anglo-Saxon settlement volume (Hamerow 1993); these are indicated in the catalogue. Three of the Roman brooches are from burials (illustrated in [Chap. 4](#); the Colchester Derivative also in the Prehistory Vol.), to which we should add two penannulars of similar type from post-Roman burials (White 1988, 11, 13). The rest are from settlement contexts (although one or two may have been disturbed from graves).

Roman Brooches

Three plate brooches of different forms are present; none of them are likely to be earlier than the late first century AD and they are more likely to belong in the second century AD. One was found in the settlement, the other two – both unusual forms for Britain – are from burials. One is a conical disc brooch (*Tutulusfibel*) of Feugère (1985) Type 25a (No. B8), the other an asymmetrical plate brooch with an enamelled lozenge-shaped field and snake-head foot, of Feugère Type 26b2a (No. B9).

One hinged brooch is of unusual form, having a divided bow and an S-profile reminiscent of the knee brooch family (No. 61). It is most likely to be of later Roman date, perhaps third-century, but came from a *Grubenhaus* and could conceivably be an Anglo-Saxon oddity.

Penannular Brooches

The two Fowler Type C penannular brooches from Anglo-Saxon contexts are either of Late Roman or Anglo-Saxon date, and differ in size and form from those assigned to the Iron Age or Conquest Period reported on in the Prehistory Volume.

Not considered here is a large bronze penannular brooch with zoomorphic terminals (Fowler's Type E), which was found in GH55 (Hamerow 1993, 61). It is quite different in character from the others. Whilst a Late Roman date was suggested, the absence of this type from

the large Richborough assemblage (Bayley & Butcher 2004) might be held to imply a still later date of manufacture.

Spatial and Chronological Patterning

A significant minority of Roman brooches were found in Anglo-Saxon features, with three being recovered from *Grubenhäuser*. These may be simply accidentally present, resulting from the disturbance of earlier features, and one or two may be in fact of later manufacture (e.g. the iron Type C penannular brooch from GH26), but the possibility that some of them had been curated should not be overlooked.

The scarcity of later Roman brooches from the site need not have any implications for the intensity of later occupation, since brooches became less common generally after the first century AD as fashions altered throughout the province.

BROOCHES FROM BURIALS

Colchester Derivative

*B6. AE 65/1 [AML 12/651] (352N/-147E)

Colchester-derivative brooch lacking pin and part of spring. Plain bow with 'D'-shaped section; solid catchplate, with impressions of two holes not punched out. Wings over spring of at least six coils. Head lug pierced by external chord also axial bar in Harlow manner. L. 42mm. Dating: mid to late first century AD.

Context: Cremation 26 (see [Chap. 4](#), RB Cemetery I).

Plate Brooches

*B8. AE 65/3 [AML 2/653] (334N/119E)

Disc brooch with conical centre with moulded tip, hollow behind; narrow raised rim. Otherwise plain. Part of pin, two-lug hinge attachment and catchplate survive. Diam. 23mm. 'Buckler' or 'Tutulusfibel'. Feugère Type 25a; Feugère suggests they originate in east-central France. Dating: late first to mid second century AD.

Context: Cremation 27 (see [Chap. 4](#), RB Cemetery I).

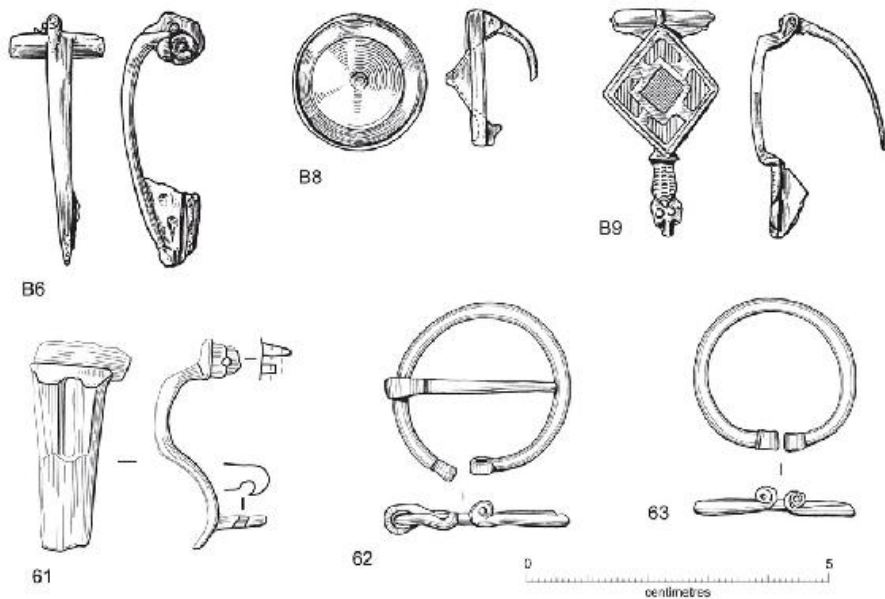


Figure 3.3. Romano-British brooches from burials (prefaced with 'B') and settlement features.

*B9. AE 65/7 [AML 384] (316.5N/-133.6E)

Complete hinged asymmetrical plate brooch with enamelled lozenge-shaped field and zoomorphic foot. Slim rectangular head, folded over to house hinge pin. Lozenge-shaped field has external rim with incised linear decoration; four 'L'-shaped panels (white?) surround a central diamond (red). A moulding separates the foot, which has incised 'scale' decoration, terminating in a snake head, with the catch plate behind. L. 38mm. No sign of burning. Feugère 26b2a, Dating: late first or second century AD.

Context: Cremation 40 (see [Chap. 4](#), RB Cemetery I).

CLASSIFIABLE BROOCHES FROM SETTLEMENT FEATURES

Plate Brooch

60. AE 120 [AML 651] (113.1N/331.1E)

About two-thirds of a flat disc brooch. Lugs for pin and part of catchplate on rear. Plain, flat surface. There is no central attachment hole for any setting; presumably once had applied (soldered?) decorative plate. Diam. 30mm. Dating: late first century AD onwards.

Context: RBII, Level 1.

Late Roman Bow Brooch

*61. AE 51#2 [AML 351#2] (178N/145E)

Hinged split bow brooch with 'S'-shaped profile. Slightly curved

rectangular head with two-lug hinge attachment behind. Arched part of the slightly tapering bow has a flat 'D'-shaped profile and is divided longitudinally. The lower part of the bow has a flat profile and curves up at the foot (which is not quite complete). There is a small transverse hook rather than a catchplate. L. 35mm. This brooch is not easy to parallel directly among common types, but seems to be a variant of the knee brooch (e.g. Bayley & Butcher 2004, 100, no. 240), which shares the transverse hook and S-profile. Many knee brooches have springs set in a head cylinder, but can also be hinged; the double bow is rare, commoner on sheath-footed brooches. The type is also widespread on the *Limes*. Dating: later second–earlier third century AD?

Context: RBI enclosure ditch (this is the 'Roman split bow brooch' listed by Hamerow (1993, 112) amongst the finds from GH12/21, but she gives it Lab. No. 332 – which is a Colchester derivative brooch (AE 31) – and no AE number. One label with the brooch has Lab. No. 351 and 66/51, but both are crossed out. A second is annotated 'wrong label', which is crossed out. The backs of both labels sketch two brooches, one of them clearly this. This tallies with the notebook record of a second brooch being added under this SF number.

Penannular (Fowler Type C)

*62. AE 542 [AML 820877] (2260N/943E)

Penannular brooch with rolled back terminals at right angle to plane of ring; Diam. 54mm. Ring has flattened section. Fowler Type C. Published Hamerow 1993, 61, 161, fig. 167.1, where it is compared to an example from Portway Grave 67 (dated to the late fifth or early sixth century), although the latter brooch is smaller and has a rounder section (Cook & Dacre 1985, 42, fig. 67, no. 8).

Context: GH175/185, Level 1.

*63. Fe 119 [AML 512] (145N/325E)

Penannular iron brooch with rolled back terminals at right angle to plane of ring (although one looks rather flattened as on Type D). Diam. c. 38mm. Ring has round section. Pin incomplete. Fowler Type C.

Published by Hamerow 1993, 61, 116, fig. 96.6, as White Ca. Dating: Late Roman or Early Anglo-Saxon (Evison 1981); Anglo-Saxon (White 1988).

Context: GH26.

POSSIBLE BRONZE BROOCH FRAGMENTS

64. AE 62 [AML 362] (65N/310E)

Incomplete pin and two coils of spring of small brooch. Context: GH2,

Level 4, 21" deep (published but not illustrated in Hamerow 1993, 108 as 'copper alloy coil and pin of ?first-/second-century brooch').

65. AE 195 [AML 773] (277N/436E)

Slightly twisted piece of bronze, possibly part of the foot/ catchplate of a brooch.

Context: pit.

66. AE 204 [AML 782] (332N/386.6E)

One loop of spring coil.

Context: Cremation 135, Level 1.

67. AE 216 [AML 690917] (463N/524E)

Length of bronze wire, slightly tapering at ends, and bent at both ends – the bow of a wire bow brooch?

Context: ?timber slot, Level 2.

68. AE 244 (unlocated)

One loop of spring coil.

Context: pit in ditch.

69. AE 254 [AML 715315] (1057N/187E)

Square-sectioned pin fragment with loop at one end, probably from a penannular brooch.

Context: pit (cutting ditch), Level 4, 9–12" deep.

70. AE 348 [AML 744643] (1053N/625E)

Fragment of coil and part of pin. Now fragmentary and rather corroded.

Context: Well 4 (3/4 + baulks), outer light fill, Level 12–13.

71. AE 398 [AML 744693] (950N/740E)

Fragment of coil of spring.

Context: Well 6, Level 3, baulks.

UNCERTAIN, POSSIBLE BROOCHES (items not seen)

72. AE 192 [AML 770] (464N/420E)

Penannular ring, possibly a brooch. Diam. 17mm. Not identifiable further from notebook sketch.

Context: pit (also contained Anglo-Saxon pottery).

Other Copper Alloy Artefacts

Grahame Appleby

A total of 188 copper alloy objects were recovered from Romano-British features (Figs. 3.4–5; see Fig. 3.32 for distribution). Of these, 84 (38 from Well 4 alone) were fragmentary and undiagnostic, mainly

comprising corroded and friable fragments of scrap sheet, lumps and strips; this reduces the potential of this assemblage for identifying patterns of use, trade and metalworking, and makes direct comparisons with other assemblages problematic. A number of pieces of metalwork showed evidence of clipping and reduction, suggesting that metalworking was occurring on site, although no definite archaeological evidence in the form of industrial activity areas is known from this period.

The material recovered from Well 4, much of it burnt, comprises a distinct sub-assemblage from the site (see above), and probably represents household items and personal effects from a relatively affluent establishment. The protome and vessel fragments, probably from jugs and possibly basins, saucepans or dishes, are comparable to those found on sites elsewhere in Britain, such as those from Bartlow Hills, Stansted and Stanway (Gage 1838). These fragments suggest that they belonged to a household that subscribed to Roman hygienic practices (ritual cleansing), or who had acquired these items for display and serving of food and wine following Roman conventions (Cool 2006, 138); these practices, however, are not exclusive. The recovery of fragments from a possible strainer (No. 508) and other vessel or dish/basin fragments from both this feature and elsewhere on the site (Nos. 386 & 494) certainly lend support to this interpretation. Cool (*ibid.*) has observed that the number of vessels and vessel sets (jugs, basins, ladles and saucepans/buckets) recovered from rural sites is very low when compared with military, urban and villa sites. This potentially

increases the importance of the vessel fragments from Well 4 and other features and demonstrates that Romanised ritual and dining practices were followed at Mucking, at least occasionally. The pendants, hairpins and bracelets from Well 4 appear to represent items from a single collection and these might have been the personal possessions of a high-status individual. An unusual find from Well 4 is the petalshaped finial (No. 405), identified as a possible polemounted terret from a cart harness arrangement, with close parallels from the garrison sites of Castleford and Wroxeter (Bishop 1998, 77; Webster 2002, 117). A single find of this nature on a rural site, although rare, may indicate a continuing military presence or commercial activity requiring the use of carts.

The small number of military items (five) attest to a 'presence' at Mucking, albeit most likely of a temporary nature, and reflects the common recovery of small items of military equipment from Roman rural sites (belt plates, hinges, buckles and pendants). The heart-shaped pendant (No. 105) hints at a third-century or later date for the loss of this item, although an earlier date cannot be excluded. Of note is the small *phalera* (No. 544) found in the northern part of the site. Stylistically, this piece displays affinities with examples dating from the Flavian period found at Castleford and other sites discussed by Bishop (1998, 63) and hints at military involvement at Mucking during the site's early Roman occupation. The large handle-like object (No. 408) recovered from the Central Enclosure has not been paralleled and its identification as a cart-fitting must remain speculative.

The remaining assemblage from the site consists of items of jewellery and dress items (pins, rings and bracelets, and a looped fastener) and toilet implements (tweezers and a ligula), all ubiquitous finds from Roman settlement and burial contexts. The recovery of two seal-boxes and the steelyard (a residual find from an Anglo-Saxon context; Hamerow 1993) demonstrates that commercial activity was carried out on the site and that literacy was a necessary facet of the establishment (at least one iron stylus has also been recovered – see Mould, below).⁴

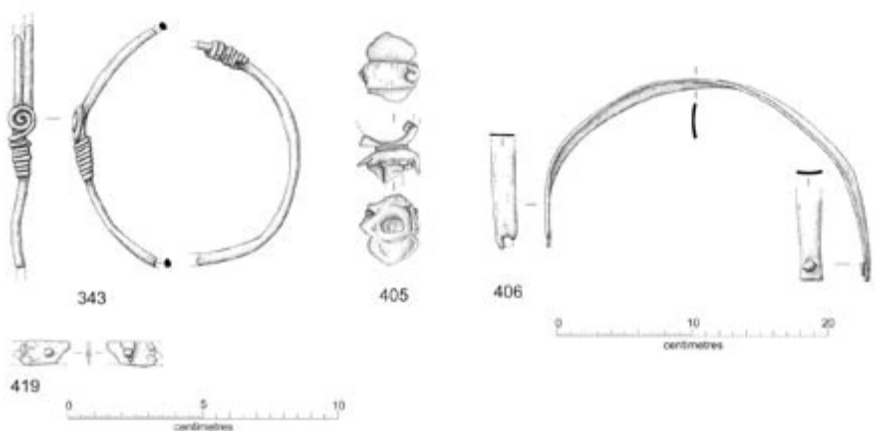


Figure 3.4. Copper alloy small finds from Well 4.

Comparatively, the number of Romano-British copper alloy objects recovered from non-cemetery contexts at Mucking is not exceptional and displays similarities of type to Kelvedon, Essex (Rodwell 1988), Great Holts Farm, Boreham, Essex (Germany 2003), Boxfield Farm, Chells, Hertfordshire (Going & Hunn 1999) and Rivenhall, Essex (Rodwell 1993). The number of finds recovered, considering the area and intensity of excavation at Mucking, is low. At

Rivenhall and Kelvedon, the area excavated was limited (less than a hectare), whilst that investigated at Great Holt was approximately eight hectares and Boxfield Farm 1.6 hectares. These sites respectively produced 92, 32, 81 and 15 copper alloy objects, including brooches. At Bancroft, Wolverton, Bucks. (Williams & Zeepvat 1994) 110 copper alloy finds were recovered (excluding brooches) from the villa and mausoleum excavations, an area of 2.5 hectares. Scaling the number of finds from these sites against those from Mucking suggests that Mucking was relatively 'impoverished'. This impoverishment contrasts starkly with the quality of finds recovered from Well 4, which attests to higher status objects and wealth. As discussed above, this low figure may be a result of mechanical surface stripping and excavation methods (particularly the lack of metal-detecting). The discovery of an eagle-headed finial in a cremation at Mucking (see [Chap. 4](#)) highlights the possibility that curation may account for the presence of artefacts within specific contexts, with objects collected over a period of time. However, the Well 4 sub-assemblage and the range of objects recovered suggest that those living at or near the site were fully Romanised.

The Well 4 Assemblage

JEWELLERY

Bangles and Bracelets

334 (AML 744629; 1049N/633E, Level 5, Central loam A-B). Very corroded fragment of a bangle or bracelet with circular impressed decoration and vertical transverse groove. L. 18.5mm, W. 8mm. Bracelets of this variety are relatively common on Romano-British sites.

*343 (AML 744638; 1048N/643E, Level 8). Circular, twisted expanding copper alloy wire bracelet, with probable iron wire core,

and flat spiral 'head' (now disintegrated). The surface is highly corroded and friable, possibly indicating this was burnt prior to deposition. Diam. c. 100mm. A similar example was found nearby in Grave 18 (RB Cemetery I, dated to the third to fourth century AD), with others found at Colchester and Lankhills cemetery, Winchester, the former dating from the third–fourth century AD (Crummy 1983, no. 1601) and that from Lankhills, between AD 310 and 410 (Clarke 1979, 120; graves G239, G323). Its inclusion in this deposit, however, strongly suggests a second-century date.

376 (AML 744671; 1051N/637E, Level 25/26). Three fragments of a plain copper alloy bangle, with 'D'-shaped cross-section. The breaks are very corroded, with delamination and metal loss. The smallest fragment is in a severe state of decay. W. 3mm, Th. 1.5mm, Diam. c. 65mm.

Pendants

350 (AML 744645; 1051N/642E, Level 14). Three scraps of copper alloy. Two pieces refit to form a tear-dropped, flat back shape, with possible lug for a loop; possibly a small pendant. L. 14mm, W. 11mm, Th. 2mm. The larger lump is very doubtful.

365 (AML 744660; 'almost certainly clean outer fill of Well 4'). Openwork, heart-shaped pendant. Burnt, corroded and concreted, with a possible silvered or tinned disc attached to the front; the suspension loop is intact. L. 42mm, W. 32mm, disc Diam. 13mm.

382 (AML 744677; 1040N/631E, 12–15" deep, dark fill C). Triangular-shaped fragment of copper alloy, with possible rounded shoulder and base of a loop and two fragments of corroded copper alloy rectangular cross-sectioned strip, L. c. 17mm, W. 3.5mm. Possible pendant fragments.

DRESS ACCESSORIES

Pins

332 (AML 744627; 1057N/637E, Level 5). Fragment of a copper alloy pin or needle. L. 41.5mm, Diam. 2mm.

337 (AML 744632; 1052N/631E, Level 6/7). Very corroded and friable copper alloy fragments. The largest fragment may be from the head of a pin, possibly in the form of a tight floret.

354 (AML 744649; 1063N/637E, Level 16). Fragment of pin or needle shank, circular cross-section. L. 18.5mm, Diam. 1.5mm. The surface is corroded and friable.

378 (AML 744673; 1045N/634E, Level 39/40). Large copper alloy hair-pin, broken at the mid point, with a domed head. L. 88mm.

PERSONAL ITEMS

333 (AML 744628; 1049N/633E, Level 5). Very corroded and fragmentary tapering thin copper alloy strip, probably from a set of tweezers. L. c. 31mm.

HORSE-GEAR

*405 (AML 744700; 1058N/625E, Level 4, 9–12" deep, dark fill). Finial with four petals, with fragment of iron shank. The petals are arranged in opposing pairs, with one smaller and one larger pair; one large petal is substantially missing. A large ring or loop, only partially surviving, is present, approximately 14mm wide at the base, tapering towards the breaks. A similar shaped object has been recovered from Castleford, Yorks., and identified as pole-mounted terret, with scalloped edges, from a cart harness, probably fitted to the yoke (Bishop 1998, 77, no. 301).

*419 (AML 744729; 1050N/622E, Level 9, 24–27" deep). Copper alloy strip, tapering from a possible hinge with a fragment of a second strip attached with by a rivet; the perforation for a second rivet partially survives at one end. L. 19mm, W. 9–10mm. Probable strap joiner/fitting.

POSSIBLE TOOLS

361 (AML 744656; 1044N/636E, Level 7). Curving and tapering rectangular, cross-sectioned copper alloy bar, with defined corners along its longitudinal edges. L. 28mm, W. 5–6.5mm, Th. c. 3mm. Function unknown as broken.

379 (AML 744674; 1053N/633E, Level 45/46). Rectangular cross-sectioned tapering bar; dimensions: L. 29mm, W. 8mm, Th. 3–5mm, Wt 6g.

DOMESTIC ITEMS

*406 (AML 744701; 1046N/626E, Level 8). Corroded copper alloy band, bent, with a surviving rivet at one terminal and partial perforation on the other. Despite the bent shape of the band, there is one straight long edge, with the band widening towards the centre. Traces of a decorative motif of incised grooves, dots and circles survive towards one terminal (broken end), but the surface is poorly preserved and friable. There is evident metal loss, some delamination and the item is probably burnt. It is unclear whether the band was a curved decorative strip, or has become distorted post-deposition, although the former is more likely. L. c. 120mm, W. 8mm at terminals to 13mm at mid-point.

346 (AML 744641; 1041N/639E, Level 12). Several large fragments of burnt and corroded copper alloy sheet, up to 36mm wide, and numerous smaller pieces. The larger pieces are slightly curved in

places, with the smaller pieces flat. These fragments may be from a vessel, bowl or dish; thickness up to 1–2mm where seen.

362 (AML 744657; Level 19, dark fill C). Burnt, melted and corroded copper alloy fragments and lumps. One piece may be the remains of a three-lugged fastener or stud. A second piece consists of a riveted bar or strip, with a clearly defined corner and may be from a small casket, or a box-fitting or decorative corner piece from another object (L. 29mm × 20mm). The largest fragment appears to be the remnants of a hinge, with possibly one *in situ* rivet, L. 25mm, W. 17mm.

360 (AML 744655; 1050N/622E, Level 13). Large copper alloy domed stud or boss, possibly with lead core. Diam. 21mm, Ht 6mm, Wt 3g. These copper headed bosses were frequently fixed to mask iron nail heads, secured using lead. Similar bosses have been recovered from Caerleon (Lloyd-Morgan 2000, 360 & fig. 86), Colchester (Crummy 1983, 119 & fig. 124) and Wroxeter (Webster 2002, 117, no. 138).

371 (AML 744666; 1051N/637E, Level 23). Corroded and friable irregular fragment of copper alloy sheet. L. 18mm, W. 13mm, Th. c. 1.5mm. Possibly from a vessel.

386 (AML 744681; 1043N/623E, Level 5, 12–15"). Fragment of a circular flat, reasonably heavy and thick piece of copper alloy with an upturned rim or edge, possibly part of a vessel or dish/platter. Surface is corroded, Wt 3g, L. 20mm, W. 17mm, Th. c. 2.5mm.

328 (AML 744624; 1050N/622E, Level 2). Two small thin pieces of copper alloy sheet, with possible stamped decoration of raised boss c. 1mm in diameter and ridges. The fragments are very corroded and fragile, making further determination of the decoration difficult. Possibly from a decorated vessel. Th. c. 1mm.

357 (AML 744652; 1050N/622E, Level 18). Corroded and burnt fragment of copper alloy sheet, thicker at one side, with a possible surviving rim. W. 10mm, Th. 1–2.5mm. Possible vessel or dish fragment(?).

352 (AML 744647; 1052N/631E, Level 14/15). Everted rim fragment with cordon from a copper alloy vessel measuring c. 12cm in diameter.

335 (AML 744630; 1052N/631E, Level 4/5). Small domed copper alloy rivet. Diam. 8mm, L. 11mm.

SCRAP AND UNIDENTIFIED ITEMS

327 (AML 744623; 1052N/631E, Level 2/3). Rounded and flattish lump of copper alloy. Diam. c. 14mm, Th. 5mm, Wt 4g.

329 (AML 744625; 1051N/642E, Level 4 dark fill). Copper alloy scrap and dust; no further details (not seen).

331 (AML 744626; 1050N/622E, Level 4). Two extremely small scraps of copper alloy.

336 (AML 744631; 1056N/628E, Level 5). Copper alloy scraps, very corroded; no further details (not seen).

338 (AML 744633; 1045N/637E, Level 7). 'Flat' scraps of burnt copper alloy, some with possible iron corrosion products, with thickness up to c. 1.5mm.

339 (AML 744634; 1044N/636E, Level 7). Numerous small fragments and pieces of copper alloy sheet. Total Wt 13g. Possibly the same as Cat. No. 338.

340 (AML 744635; 1050N/622E, Level 8). Very small irregular corroded scrap of copper alloy sheet or strip, L. 6mm, W. 4.5mm, Th. 1mm.

341 (AML 744636; 1053N/635E, Level 8). Small corroded blob (melt?) of copper alloy, rounded and thicker at one end, flat on one side. L. 12mm, W. 7mm, Th. 4.5mm.

342 (AML 744637; 1053N/625E, Level 6/7). Lump of corroded copper alloy, L. 20mm, W. 12mm, Th. 5mm.

344 (AML 744639; Level 11). Copper alloy 'blob' (9mm × 7mm) adhered to large, heavy lump of slag, probably of iron; there may also be bone attached to the slag.

345 (AML 744640; 1043N/640E, Level 13/14). Burnt and deformed piece of copper alloy sheet. L. 17mm, W. 11mm, Th. 1mm.

347 (AML 744642; 1041N/639E, Level 13/14). Several fragments, lumps and blobs of melted and corroded copper alloy sheet, Wt 9g. The larger sheet fragments are c. 0.5mm thick.

349 (AML 744644; 1041N/639E, Level 13). Numerous molten copper alloy lumps and scraps (over 50 pieces), including pieces of sheet, one relatively large (16mm × 27mm). Total Wt c. 15–20g.

351 (AML 744646; 1043N/640E, Level 15). Described during the MPX-phase as over 50 scraps of corroded copper alloy sheet; no further details (not seen).

353 (AML 744648; 1041N/639E, Level 15). Described by the MPX-phase as five corroded scraps of copper alloy; no further details (missing).

355 (AML 744650; 1063N/637E, Level 17). Small and corroded burnt folded fragments of copper alloy sheet, with one possible small rivet. Total Wt 6g.

356 (AML 744651; 1050N/622E, Level 18). Relatively heavy (3g) fragment of undecorated copper alloy sheet, 1mm thick, possibly polished on one side; one surviving edge. L. 32mm, W. 24mm.

358 (AML 744653; 1050N/622E, Level 2). Unidentified corroded 'L'-

shaped object, possibly melted debris. Wt 7g.

359 (AML 744654; 1053N/635E, Level 7). Very corroded, relatively thick, flat triangular-shaped copper alloy fragment. The item has a rounded corner, straight edge and one flat side, suggesting this is a fragment or 'chip' from a large object. L. 21.5mm.

363 (AML 744658; 1051N/637E, Level 21). Fragments of corroded and very fragile folded copper alloy sheet; Thickness of largest piece c. 1.5mm.

364 (AML 744659; 1050N/630E, Level 21). Lump of melted and distorted/folded copper alloy sheet, Wt 8g. Part of the sheet preserves the original thickness of the piece: 1mm.

366 (AML 744661; 1046N/632E, Level 20). Two small corroded globular lumps (melted?) and a small round droplet of copper alloy.

367 (AML 744662; 1046N/626E, Level 1). Corroded rectangular shaped copper alloy sheet. L. 20mm, W. 11mm, Th. 1.5mm.

368 (AML 744663; 1046N/632E, Level 20). Three very small burnt and corroded lumps of copper alloy.

369 (AML 744664; 1046N/632E, Level 21). Identified during the MPX-phase as a possible corroded strap; no further details (not seen).

370 (AML 744665; 1045N/634E, Level 22). Large number of corroded and fragile fragments of copper alloy sheet, measuring from less than 1mm to 15mm and thickness up to 1.5mm.

372 (AML 744667; 1045N/634E, Level 23). Burnt and very corroded lumps of copper alloy and burnt and corroded pieces of copper alloy sheet; total Wt 6g.

373 (AML 744668; 1046N/632E, Level 24). Extremely small fragments of corroded copper alloy sheet, originally one piece and thought to be a scrap of sheet.

374 (AML 744669; 1046N/632E, Level 25). Blob of molten copper alloy, adhering to sand; 7mm × 6mm.

375 (AML 744670; 1052N/638E, Level 29). Two fragments of corroded copper alloy sheet, measuring c. 8mm × 9mm and 0.5mm thick.

377 (AML 744672; 1046N/637E, Level 35/36). Fragment of copper alloy sheet with flanged edge and perforation. The object is very corroded and friable. L. 17mm, W. 13mm, Th. c. 1.5mm; perforation Diam. c. 2mm.

380 (AML 744675; 1047N/633E, Level 47–8, Fill M). Described during the MPX-phase as a perforated sheet, possibly a mount; no further details (not seen).

381 (AML 744676; 1058N/630E, Baulk outer fill D). Numerous scraps and fragments of corroded and fragile copper alloy sheet, measuring

up to 15mm wide. Several pieces of sheet fragment are adhered to each other. Total Wt 15g.

383 (AML 744678; 1047N/642E, Dark fill C). Several fragments and lumps of very corroded and fragile copper alloy sheet, folded and distorted. Where seen, the sheet(s) measured c. 0.5mm to 1mm thick.

384 (AML 744679; 1053N/624E, Dark fill C). Triangular cross-sectioned and curving corroded fragment of copper alloy; L. 16.5mm, W. 4mm, Ht 3mm.

385 (AML 744680; 1047N/642E, ?Dark fill). Very burnt and very corroded lumps of copper alloy, possibly sheet, with evident metal loss. Total Wt 6g. These lumps have been subjected to relatively high temperatures, insufficient to cause them to melt, but they have become plastic.

The Wider Site Assemblage

JEWELLERY

Finger-rings

*81 (AML 388; 370N/140E, RBI, Level 2). Small copper alloy bezelled finger-ring with one surviving waisted hoop with incised triangle decoration. The bezel possesses an incised decoration, possibly a snake, but is indistinct. A small triangular fragment of copper alloy sheet was also recovered with the ring, measuring 12mm × 18mm.

*82 (AML 389; 370N/140E, RBI dark loam, Level 1). Copper alloy finger-ring with large recessed bezel for an oval intaglio or similar, with no obvious external lip or rim. W. across bezel 16mm, Th. 4mm.

103 (411N/155E, RBI, late fill, Level 2). Two fragments of copper alloy, possibly from different finger-rings. The smaller fragment is largely complete, although missing one side; W. 6mm, Diam. c. 14mm. The surface is perforated and pitted, most probably a result of corrosion, although decoration cannot be excluded. The larger fragment is bent in the same manner as the smaller ring, but is missing the lower part(s) of the hoop; W. 8mm, Diam. c. 16mm. This ring is also perforated, suggesting that these are more likely to be deliberate or decoration that thinned the metal which has subsequently corroded.

104 (372N/146E, RBI, light brown loam). Identified as a possible copper alloy finger-ring during the MPX-phase, narrower on one side, with horizontal groove (not seen).

*123 (AML 654; 250N/320E, RBI outer ditch). Complete, coiled copper alloy finger-ring, with 'D'-shaped crosssection. The ring is in excellent condition with little evident corrosion. Diam. 18.5mm, coil

W. 2.5mm, Th. c. 1.5mm.

248 (AML 715302; 929N/261E, posthole). Fragment of a very corroded, bent narrow copper alloy strip, possibly part of a finger-ring or similar. W. 2mm, Th. 1.5mm.

421 (AML 744731; 1518N/675E, ditch, Level 4, 15–21" deep, late loam). Two fragments of a circular cross-sectioned finger-ring with tapering terminals. Th. 2mm, internal Diam. c. 19–20mm, Wt 2g.

*437 (AML 750402; 1408N/621E, ditch, Level 1, 0–3" deep). Copper alloy strip, rectangular cross-section, bent into a spiral ring with three turns and tapering terminals. The ring is well preserved, although the surface is corroded. Diam. 16mm, mid-point W. 2.5mm, with rounded crosssection, Wt 6g. Coiled finger-rings are common personal items from Roman and earlier contexts and found in both settlement and burial contexts. Similar examples are known from Great Holts Farm, Essex (Germany 2003, 75) and Castleford, Yorkshire (Cool 1998b, 58).

457 (AML 750422; 1834N/815E, LMIA pit, Level 3, late fill). Very corroded and friable fragmented finger-ring with possible green enamel insert in bezel. Total Wt 2g.

Bangles and Bracelets

47 (AML 347; 243N/373E; Ditch). Bent and very pitted copper alloy strip, with D-shaped cross-section. The large part of the strip is straight, with one end bent. It is unclear if this is from a bangle or other object. L. 63mm, W. c. 3.5mm.

*56 (AML 356; 156N/209E, RBI, Level 1). Large snakes-head bracelet with flattened terminals; eyes are clearly visible on one terminal. Tapers from a maximum width of 6mm to 3mm. Internal Diam. 72mm, Wt 9g; conserved. Comparative examples are known from Colchester (Crummy 1983) and elsewhere, dating from the second to fourth centuries AD.

76 (AML 380; 164N/224E, RBI). Rectangular cross-sectioned fragment of a bracelet or ring. Estimated Diam. c. 50mm, Th. 2mm, W. 4.5mm, Wt 1g.

*80 (AML 387; 225N/379E, RBII, Level 1, top fill). Identified during MPX-phase as a copper alloy bracelet very badly encrusted with sand c. 65mm in diameter, decorated.

117 (421N/278E, RBI). A possible copper alloy bracelet identified during the MPX-phase, with damaged edges (not seen).

193 (AML 771; 296N/494E, pit, Level 0). Fragment of copper alloy bracelet with incised 'X'-shaped and diamond decorative motif, with perforated terminal for clasp. Diam. c. 38mm, W. 3.5mm.

*257 (AML 715318; 1040N/187E, pit, Level 1). Fragment of a wide, decorated copper alloy bangle or *armilla*, with five parallel grooves

and possible ring impressions. W. 16mm, Th. c. 1mm. The attribution of this object as an *armilla* is tentative as it shows only general similarities to those described by N. Crummy (1997).

277 (1225N/205E, Ditch B6, Level 2, 11" deep). Identified during the MPX-phase as a curved piece of heavy copper alloy (not seen); notebook sketch indicates round-sectioned, possibly a bangle.

286 (AML 729133; 1274N/180E, Ditch B1, Level 1). Larger copper alloy 'D'-shaped bar, with 'D'-shaped cross-section. The bar is corroded and widens at one end (5.5mm) from a central width of 4mm, and weighs 6g. The size and shape of this object suggests it may be a small bangle, possibly imitating a snakes-head bracelet; however, this attribution is uncertain and a more mundane function for its use may equally apply.

287 (1134N/370E, PG64, late fill, Level 1, 0–3"). Corroded and pitted small flat rectangular cross-sectioned bracelet or strip, with square terminals or transverse breaks. Traces of a decorative motif consisting of panels separated by grooves with a central ring-dot impression. W. c. 6mm, Wt 4g.

292 (AML 729139; 1147N/239E, pit, Level 2). Oval penannular bracelet with rectangular cross-section, rounded terminals, with an internal diameter measuring approximately 46mm. Th. 2mm, W. 5mm. The surface is pitted and corroded.

320 (AML 744616; 193N/576E, Kiln Ditch baulk, Level 2, 6–12" deep). Decorated flat copper alloy bangle fragment. The bangle is decorated with small ring and dot (two concentric rings) impressions along the outer edge. The surviving terminal has a rectangular perforation (measuring 3.5mm × 5mm), with rounded corners, to receive the catch. W. 8.5–11mm, Th. 1mm. Comparative examples are known from other sites in Essex, for example Colchester (Crummy 1983).

387 (AML 744682; 570N/693E, Well 5, Level 5). Twisted copper alloy wire bangle, in two pieces. One terminal preserves the loop and the other part of the hook. Th. 3mm.

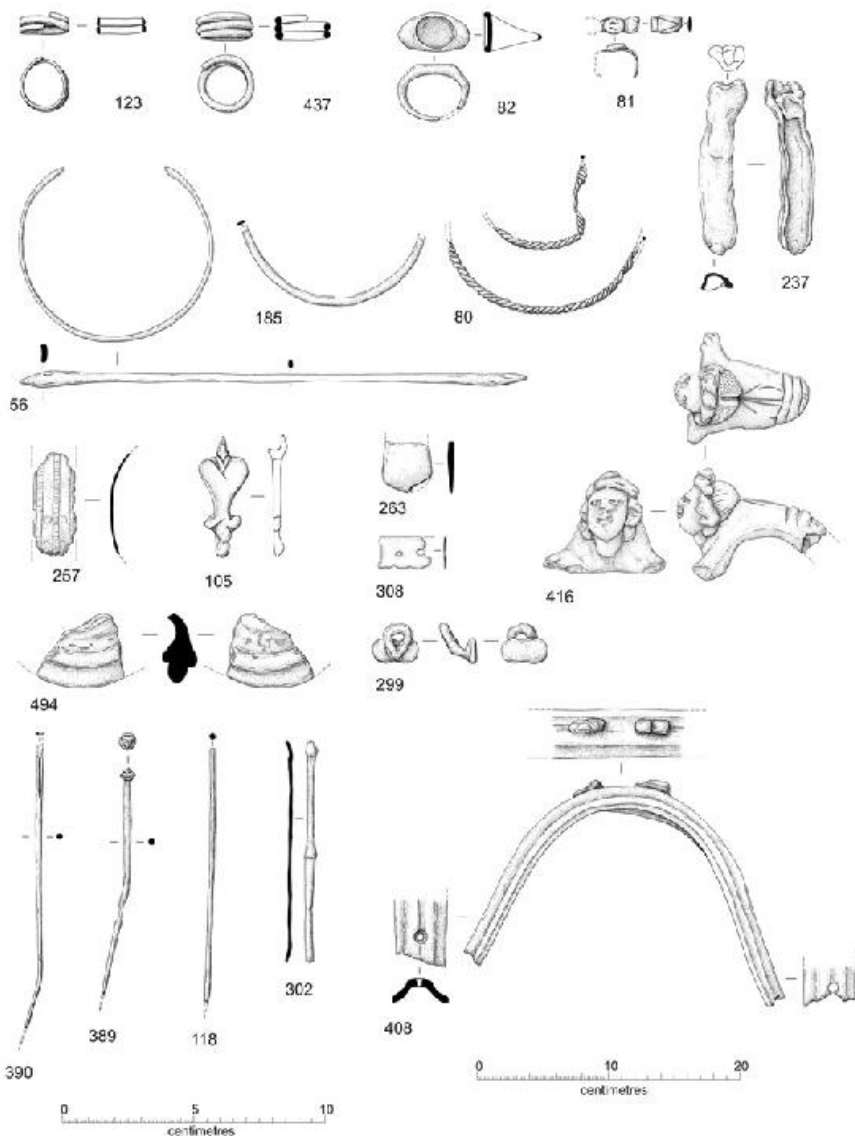


Figure 3.5. Copper alloy small finds from other settlement features.

Pendants

578 (AML 820813; 260N/350E, Surface find). Identified during the MPX-phase as a cast knob with perforated arms, two of which were threaded with wire, possibly a pendant; no further details (missing).

DRESS ACCESSORIES

Pins

6 (AML 318, 79N/279E, South Rings Outer, Level 2,). Possible copper alloy pinhead, measuring c. 6mm diameter.

36 (AML 337; 149N/248E, RBI, Level 1). Fragment of thin tapering pin shaft. L. 29.5mm, Diam. 1.5–2mm.

75 (AML 379; 176N/182E, Masonry Building A, Level 1). Four refitting fragments of a copper alloy pin, with one end slightly curved and the other flattened. L. 64mm. Possible brooch pin.

90 (AML 397; 215N/384E, RBII, Level 0). Copper alloy pin/ needle shank, circular in cross-section, missing its head. L. 68mm, Diam. c. 2mm.

108 (AML 499; 285N/305E, RBI, Level 1). Two large fragments of copper alloy wire; Diam. 2.5mm, L. 54mm and 57mm. Conserved. Possible swanshead pin shaft(s) or similar.

*118 (AML 649; 130N/340E, RBII, Level 3, 12–18" deep). Large pin, broken at both ends. L. 97mm, Diam. 2mm.

169 (AML 747; 300N/395E, RBII, Level 1). Small, very corroded copper alloy flattened sphere; Diam, 8.5mm, Th. 5.5mm. Possible pinhead.

184 (AML 762; 296N/494E, RBII). Small very fine copper alloy dress or hair pin, with flattened circular head. L. 23mm.

217 (AML 690918; 742N/230E, pit, Level 1). Two fragments of very corroded and degraded copper alloy pin(s), with rounded D-shaped cross-section. L. 2.3mm and 1.9mm, W. 4mm.

258 (715N/505E, Ditch F11, Level 1, 0–6"). Identified during the MPX-phase as round-sectioned wire or a pin (not seen).

315 (AML 744611; 830N/672E, Central Enclosure ditch, Level 1). Identified as a possible round-sectioned pin during MPX-phase; no further details (not seen).

323 (AML 744619; 879N/710E, pit, Level 0). Copper alloy pin with flattened loop. L. 77mm, Diam. 3mm.

*389 (AML 744684; 1113N/877E, Ditch E1, Level 1). Conical headed pin with round collar and four-sided faceted head. Slightly bent, L. 88mm.

393 (AML 744688; 858N/733E, inner ditch of Central Enclosure, Level 3). Identified during the MPX-phase as seven fragments of a copper alloy pin c. 80mm long (not seen).

441 (AML 750406; 1663N/733E, ditch, Level 1). Two very corroded fragments from copper alloy pins. Both of roughly equal length, they measure c. 19mm. One piece preserves the lower fragment of the eye.

576 (AML 820910; -100N/510E, Well 8, Level 1). Large copper alloy pin with top portion missing; L. 45mm.

Fittings and Fasteners

13 (AML 9; 175N/147E, RBI). Described during the MPXphase as a decorated belt end, found with charred slag (?); not seen.

168 (AML 746; 335N/325E, RBI, Level 1, late loam). Fragment of twisted copper alloy bracelet. Diam. 3mm, L. 20mm.

183 (AML 761; 295N/425E, RBII, Level 1). Identified during the MPX-phase as a possible buckle fragment measuring 35mm × 21mm (not seen).

*299 (800N/208E, Ditch B40). Complete Class I copper alloy button and loop fastener with solid double boss-head and heavy ring-loop (Wild 1970a, 137 & fig. 1). Boss Diam. 9mm, ring Ht c. 16mm. These fasteners have their origin in the Iron Age and may pre-date AD 43, or possibly introduced during the Claudian period. Three similar examples were recovered from Camerton (Jackson 1990).

PERSONAL ITEMS

176 (AML 754; 338N/456E, RBII, Level 3). Tapering, slightly curved rectangular copper alloy strip with rounded corners at the widest end, and narrow end folded over. L. 31mm, W. 4–10mm. The item appears to be complete, although it may be a tine from a broken set of tweezers or part of a toilet set.

261 (328N/507E, RBII, Level 1). Three very corroded and friable fragments of narrow copper alloy strip. Total L. c. 30mm, W. 4mm, Th. c. 1mm.

264 (AML 715297; 328N/507E, RBII, Level 1). Three fragments (originally two) of rectangular cross-sectioned thin copper alloy strip, L. c. 35mm. The fragments are very corroded and friable and thought initially to derive from a set of tweezers.

*302 (AML 731253; 595N/495E, IA ditch, Level 1). Almost complete *ligula* or scoop and two fragments of narrow copper alloy strips, possibly from a chatelaine or personal hygiene set. The *ligula* is 45mm in length.

303 (728N/479E, Ditch F11, Level 3). Four pieces of copper alloy identified during the MPX-phase as possible fragments from a set of tweezers; no further details (not seen).

318 (AML 744614; 1042N/620E, Ditch A5A, Level 3). Very corroded and friable fragments of a narrow copper alloy strip, possibly from a set of tweezers. Too degraded to remove from storage packaging.

OFFICIAL AND POSSIBLE MILITARY ITEMS (including horse-gear)

147 (AML 725; 294N/432E, GH55). Copper alloy steelyard measuring 102mm × 26mm. Found as a residual or curated item in an Anglo-Saxon *Grubenhau* (Hamerow 1993, 126).

214 (AML 690915; 571N/464E, pit , Level 1). Approximately two thirds of the base of a circular copper alloy seal-box, with two broken lugs for the hinge. The sides, where surviving, are near vertical and increase in height towards the hinge. The base has two complete perforations, with a diameter of c. 20mm. Seal-boxes were used to protect an impression created using an intaglio to seal important documents, packages and correspondence, with a possible main period of use peaking in the second century AD. Similar examples are known from across the Empire and throughout the Roman period, although are less common on late third- and fourth-century sites (Cool 1998a, 99).

215 (AML 690916; 481N/604E, pit, Level 1). A possible copper alloy seal-box or pendant fragment. Original dimensions 27mm × 20mm; extremely fragmentary and corroded.

*263 (AML 715296; 505N/436E, pit, Level 1). Slightly tapering copper alloy plate with straight sides and rounded end, measuring 18mm × 17mm, and c. 1.5mm thick. The appearance is very similar to a piece of scale-armour, *lorica squamata*. This form of armour was relatively common in the early Principate, and used by legionaries, *auxilia* and cavalry units (Bishop & Coulston 2006, 95 & fig. 54; Wild 1981, 305; Frere *et al.* 1974, 50, fig. 27).

476 (1775N/1050E, North Enclosure, Level 2). Identified during the MPX-phase as a military belt binding, 100mm long, with possible rivet holes for re-use (missing).

*308 (AML 744604; 796N/656E, Windmill area, Level 3). Broken cuirass hinge or strap fitting, with two perforations from *lorica segmentata*. L. 20mm, W. 12mm. Cuirass fittings, especially broken, are relatively common on Roman sites due to their flimsy construction and are known throughout the empire (Bishop & Coulston 2006, 95–8; fig. 56). A similar, complete example, was found during excavation of the Romano-British settlement at Woodcock Hall, Saham Toney (R. Brown 1986).

*237 (AML 715285; 816N/256E, posthole, Level 0). Severely corroded U-shaped copper alloy strip with thin bent tongue at one end; L. 64mm, W. 12mm, Th. c. 3mm. Probable binding, possibly from a shield (Bishop 1998, 64, fig. 20; Frere *et al.* 1974, fig. 29).

*105 (AML 496; 249N/242E, RB9, Level 1). Long, heartshaped horse harness pendant with broken suspension loop, incised 'v' at loop junction and projections, with rounded terminal. A near identical example from Saalburg (Germany) dates from the third century AD (Bishop & Coulston 2006, fig. 191), although similar pendants are known from Britain dating from the late first to second half of the

second century AD, for example that found during excavation at Caerleon (Lloyd-Morgan 2000, 382, fig. 93, no. 180).

314 (AML 744610, 270N/625E, Kiln Ditch, Level 1) Described during the MPX-phase as a possible half 'split-pin', not corroded (not seen).

CRAFT AND OTHER POSSIBLE TOOLS

*390 (AML 744685; 1121N/885E, Ditch E1, Level 2). Large, bent needle with lower part of the eye intact. L. 107mm, Wt 3g.

414 (AML 744724; 950N/740E, Well 6, Level 14, 13–14' deep). Severely corroded needle missing both terminals, although grooving for the eyelet survives. L. 53.5mm, Diam. 2.5mm.

70 (AML 374; 34N/253E, RB5, Surface find). Rectangular cross-sectioned, tapering copper alloy bar, W. 4–5.5mm, Th. 1–3.5mm. The bar is slightly curved, and is thus possibly a small tool. L. c. 33mm.

426 (AML 744736; 110N/530E, Kiln Ditch, Level 1). Narrow, slightly waisted, copper alloy bar, with 'D'-shaped crosssection. L. 17mm, W. 6–7mm, Th. 3mm.

DOMESTIC ITEMS

180 (AML 758; 344N/148E, RBII, Level 2, 6–18" deep). Fragment of a bar or rod with raised ribs along both edges. Rectangular cross-section; L. 26mm, W. 6mm. Finished to a high standard, several possible functions or uses can be suggested for this object, including part of a key or instrument.

119 (AML 650; 170N/360E, RBII, Level 1). Identified as a copper alloy socketed key handle or finial during the MPXphase, measuring 46mm × 27mm (not seen).

*416 (AML 744726; 842N/744E, Ditch A2B, Level 3, see also [Fig. 5.14](#)). Heavy copper alloy handle, possibly brazed, from a jug or ewer, with female human-faced protome with hair surrounding the face and forehead and parted at the back. A similar female motif is present on a complete trilobate ewer recovered from the Claudio-Neronian Grave 6260 excavated at Site D of the Pepperhill to Cobham A2 Road Scheme (Allen *et al.* 2012, 325 & 479 and figs. 4.14–15), with a direct comparison also found at Winchester (Clarke 1979). In terms of its form, as remarked upon by Scott (in Allen *et al.* 2012, 342), the female Winchester example wears a diadem and it was suggested that the figure represents a goddess; however, there is no clear evidence for a diadem on the Mucking example. The style of the Mucking protome suggests it dates to the first century AD and would have formed part of a set of metal and ceramic vessels used in hand-washing rituals and feasting (see Cool 2006). It is interesting to observe that jugs or ewers with human faces or lions represented on

them (e.g. the 'Warrior's burial' Stanway, Crummy *et al.* 2007, 185 and Grave 6635, A2 Road Scheme, Allen *et al.* 2012, 366) have generally been recovered from Late Iron Age and Early Roman burial contexts identified as part of the Welwyn funerary tradition. The recovery of the example from Mucking from a non-funerary context is thus of importance and attests to the relatively high status of the Roman settlement here.

*408 (AML 744703; 1252N/787E, Central Enclosure inner ditch, Level 7, 19" deep). Heavy copper alloy 'handle-like' object, with flattened W-shaped cross-section, flanged edges, medial ridge and central groove. The ends have irregular transverse breaks, and one complete and one partially complete piercing for studs or nails. Two broken lugs are present at the apex of the object, circular in cross-section, and fitted in alignment to the medial groove, and are clearly where another object was attached to this piece, possibly decorative. Wt 119g, L. 123mm, W. 22mm. Attributing a function to this object is problematic, but it is unlikely to be a bucket handle.

508 (AML 820843; 1870N/1060E, North Enclosure, late fill). Several fragments of a perforated copper alloy sheet. A minimum of four perforations can be identified, one complete, on one fragment; the perforations measure c. 2–3mm. Although fragmentary, these pieces may have once formed part of a strainer (see Trow 1988, 66, no. 105, for a possible similar fragmentary perforated strip from Puckeridge-Braughing).

*494 (AML 820829; 1715N/1045E, North Enclosure, Level 0). Heavily cast moulded object with bevelled ridges either side to produce a fleur-de-lys cross-section on the outer edge. The central area of the item is raised, suggesting either a decorative motif or attachment point. Although heavily corroded, the surface may originally have been silvered. Th. 13mm, Wt 26g. Probable pedestal from a vessel.

MISCELLANEOUS

42 (AML 342; 178N/145E, RBI, late fill, 15" deep). Very thin bronze strap (not seen).

60 (AML 360; 158N/187E, RBI, Level 1). Rectangular cross-sectioned copper alloy bar. The bar has a slight S-shaped curve to it and may taper at one end with the other end (head?) bent and flattened. L. 65mm, W. c. 4.5mm × 5mm, 'head' 6.5mm wide, Wt 8g. Function unknown. (Published under GH11 in Hamerow 1993, 112).

*185 (AML 763; 344N/327E, RBI, Level 1, 0–6" deep). Fragment of half of a thin, flat, rectangular cross-sectioned rim. The surface is pitted and corroded, possibly burnt; internal Diam. c. 63mm, W. 3mm,

Th, c. 1.5mm. Possibly a collar, washer/spacer or bangle.

186 (AML 764; 340N/325E, RBI, Level 1). Very small corroded and fragile copper alloy ring, Diam. 5.5mm, max Th. 2mm.

187 (AML 765; 344N/327E, RBI, Level 1). Two fragments of copper alloy wire, with round cross-section. Diam. 2mm, L. c. 70mm.

188 (AML 766; 326N/408E, RBII, Level 1). Very fragmentary and fragile small copper alloy ring, or hoop, Diam. c. 11mm.

216 (AML 690917; 463N/524E, beam-slot, Level 2). Identified during the MPX-phase as a bent pin or wire; no further details (not seen).

245 (AML 715301; 893N/262E, pit, Level 3). Three very small fragments of round copper alloy wire.

267 (AML 715300; 388N/525E, Enigma). Flattened rounded cross-sectioned ring, of which only half survives, with clear transverse breaks. Internal Diam. 18mm, Wt 2g.

313 (AML 744609; 125N/530E, Kiln Ditch, Level 2, dark fill). Heavily corroded and friable ring and wire fragments and small copper alloy 'lumps'; total Wt 1g. Largest fragment has an internal diameter of 24mm and a maximum thickness of 3mm, with one end clearly thicker. The wire fragment measures c. 1mm in diameter and is of a paler green patina than the ring.

357 (AML 690835; 387N/344E, RBI, Level 1). Small corroded iron ring or washer and rectangular cross-sectioned fragment of an iron shank or similar.

396 (AML 744691; 1238N/723E, Surface find). Identified during the MPX-phase as a copper alloy round-headed stud with a broken shank; no further details (not seen).

497 (2104N/672E, north ditch of enclosure, Level 11). Described during the MPX-phase as a rivet or pinhead, with broken iron shank; no further details (missing).

Lead Artefacts Quita Mould

A small collection of 30 items of lead alloy, hereafter referred to as lead, was examined from the settlement (see [Fig. 3.32](#)). The majority comprise small, solidified lumps of melted lead which cannot be independently dated. Half (16) of the lead items had been weighed previously and the weights recorded on the bags in red ink. The recorded weight and the present weight were found to vary slightly. Most (80%) had lost a few

grams in the intervening years, between 1–5g, three had lost more than 7g (one example now weighing 28g less than when first weighed, suggesting either an inaccuracy or the loss or disintegration of part of the find).

Domestic Textile Production

A spindlewhorl (No. 98) of plano-convex shape was found in a ditch fill. The relatively large size of the spindle hole, measuring 8–9mm in the upper face and 10mm in the lower, suggests it may well be of post-Roman date. It is comparable to, if slightly smaller than, an example with a similarly sized spindle hole from a thirteenth- to fourteenth-century boundary ditch at Winchester (Rees *et al.* 2008, 247, fig. 133, no. 1682).

98 (170.6N/563E, ‘Antler’ Ditch, Level 6). Lead spindlewhorl of truncated conical shape (plano-convex) with flat lower and slightly flattened upper face, perforated by a central, waisted hole. Diam. 31mm, Ht 9.88mm, Wt 47g.

Domestic Items

A pot ‘mend’ (No. 143) comprising a thick plug with flattened heads or flanges at each end came from ditch clearing. A well-known object type, it is comparable with an example from Catterick that had a sherd of shelltempered pottery still lodged between the two flanges when found (Cooper 2002, 107, fig. 281, no. 17). A piece of broken caulking (No. 138) was found in Well 4 along with a fragment with an L-shaped profile in one face (No. 141) that had been formed around an angular item and is likely to be a second example. Such plugs and seatings may have had a number of uses in the domestic setting.

A round-sectioned rod with a hooked terminal (No. 145) was found in Well 7. If it were made of iron or copper alloy this would certainly be considered a handle and it might also be the case here. Small fragments broken from another rod (No. 148) came from the baulk of the ditch of the North Enclosure. Pieces of round-sectioned rod often figure amongst Roman lead assemblages.

143 (813N/419.6E, Ditch clearing). Lead pot ‘mend’ comprising two irregular rectangular-sectioned heads joined by a thick, central plug. L. (head) 51mm, W. 50mm, Th. 10mm, Wt 69g.

145 (205S/430E, Well 7 X). Lead round-sectioned rod with a hooked end and a gently pointed tip. L. 86mm, Diam. 5.5mm Wt 25g.

148 (1654N/836E, ditch baulk, Level 3). Lead roundsectioned rod

now broken into four pieces. L. (estimated) c. 27mm, Diam. 4.4mm, Wt 2g.

Structural Lead

Two small trimmings of lead sheet, one from sheet 6mm thick (No. 34) the other 3mm (No. 146) testify to the cutting of sheet lead to size during the installation and repair of lead fittings, albeit on a very limited scale. A triangular-sectioned strip (No. 90) from a pit appears to be a partially melted trimming of sheet 6.5mm thick.

34 (Unlocated; Area of RBII). Lead triangular trimming of sheet with curled tip. L. 59mm, max W. 29mm, Th. 5.99mm, Wt 50g.

146 (90N/520E, 'Antler' Ditch, Level 1). Lead, as above. L. 13mm, max W. 8mm, Th. 2.93mm, Wt 1g.⁵

Item of Uncertain Function

A rectangular piece of thin sheet (No. 89), with a large central perforation and a pair of broken attachment points projecting from the middle of two opposing sides, was recovered from the baulk of the 'Enigma'. The purpose and date of this seating or facing is unknown; it may be of post-Roman date. The size of the sheet and presence of the large central hole is reminiscent of the top of the tiered miniature stands of copper alloy, often decorated with enamel, that are known from a number of sites including Catterick (Lentowicz 2002, 69, fig. 259, no. 243 and comparanda). An example from the shrine at Brigstock, Northants was dated to the late third to fourth century (Bateson 1981, 48). Small devotional objects were made of lead but no miniature stands of that material are known to this writer.

89 (384N/507E, Enigma baulk). Lead rectangular sheet 1.37mm thick with large central hole 25mm in diameter. A small projection, now broken, is present in two of the opposing external sides. Total L. 52mm, W. 38mm, Wt 9g.

Sheet Scrap

Two angular-shaped pieces of sheet (No. 107) each with a central perforation – one a nail hole, the other a slit – had their edges folded over and appear to be scrap sheet awaiting melting. Each had decorative and other tool marks present. One had two oblique lines, and both had a series of small pecked marks made by a pointed implement, probably the tip of a knife. Random, thick blade marks apparently made by a chisel blade rather than a knife occurred on each.

107 (1300N/200E, Western Enclosures clearing). Lead angular piece of sheet with central hole, edges rolled and folded over, blade marks and small stab marks present. L. 77mm, W. 73mm, sheet Th. 4.29mm, Wt 273g. Second piece with a central slit, edges rolled and folded over, with two oblique incised lines and small stab marks present. L. 78mm, W. 75mm, sheet Th. 3.18mm, Wt 242g.

Melted Lead

Most of the lead from the settlement was solidified former molten droplets, small pools and runnels. The individual pieces of melted lead were small and likely to have come from destruction debris or been the result of accidental fire. Their dimensions and weight are tabulated below ([Table 3.1](#)). A small fragment of thin sheet (No. 38), partially melted along one side, is included along with a partially melted sheet trimming (No. 90).

The Lead from Well 4

A piece of broken caulking (No. 138) was found in Well 4 along with a fragment with an 'L'-shaped profile in one face (No. 141) that had been formed around an angular item and was likely to be a second example. A small amount of melted lead was also present (Nos. 136, 137, 139, 140).

Table 3.1. Details of melted lead.

ID No	Location	Dimensions	Weight
1	219N/187E	48 x 44 x 21mm	196g
4	125N/295E	54 x 50 x 7.77mm	97g
36	370N/140E	23(d) x 15.45mm	17g
37	266N/477E	17 x 15 x 3mm, 10 x 8 x 2mm	4g, less than 0.5g
38	549N/320.6E	43 x 18 x 1.55mm	6g sheet part melted
40	255N/475E	33 x 15 x 7.27mm	14g
87	276N/306E	47 x 25 x 2.65mm	18g
88	350.6N/246E	57 x 49 x 9.49mm	77g
90	506N/430E	42 x 13 x 6.63mm	12g trimming part melted
106	1893N/930E	26 x 21 x 5.55mm	10g
136	1058N/625E	47 x 37 x 5.45mm	42g
137	1050N/622E	70 x 55 x 6.05mm	90g
139	1058N/625E	30(d) x 7.92mm	33g
140	1052N/631E	94 x 30 x 10.23mm	58g
141	1049N/633E	29 x 20 x 11.59mm	18g
144	994N/675E	59 x 20 x 8.19mm	42g
147	1045N/635E	38 x 22 x 7.37mm	24g
149	1660N/822E	21 x 15 x 5.04mm	5g
151	1669N/1023E	23 x 16 x 7.19mm	12g

(d) = diameter

Iron Artefacts Quita Mould

Amounting to more than 3,200 pieces and including a wide variety of items, a vast ironwork assemblage was recovered from the site's Roman-phase settlement features (Figs. 3.6–7; see Fig. 3.32 for distribution). As discussed though within the Prehistory Volume, in some cases (e.g. RBI and the Western Enclosures) the certainty of their attribution – whether Roman or Iron Age – is not without a degree of ambiguity.

Military Ironwork

The tip of a possible sword blade (No. 3371) came from enclosure RBII at the southern part of the site. It cannot be positively identified as a blade as neither the original section nor the edges were preserved and, as it was found during clearing, it may be a length of strap of more recent date. Like much ironwork, the two projectiles found cannot be easily dated independently. Each has a socketed, doubleedged blade of lentoid section. Though one (No. 2668) is more slender than the other, the blades of each are of similar length. They both fall within the small-bladed spearhead category of Manning's classification of the spearheads from Hod Hill (Manning 1985, 162, Group 1), though the socket diameter is significantly narrower. The larger projectile (No. 3020) was found when clearing a ditch within the Central Enclosure, while the more slender point (No. 2668) came from an upper fill in Well 7; both are probably later first-century in date. Although the latter is comparable with the narrower, small-bladed spearheads from Hod Hill (Manning 1985, V38 and V42 for example) there is little to differentiate it from medieval military, armour piercing arrowheads of Jessop's Type M9 (Jessop 1996, 199). A broken socket (No. 3476), possibly from a projectile or other socketed implement, was found in the outer ditch of the Central Enclosure. The socket had mineraly preserved remains of the wooden haft within. A small split, nailed socket (No. 3477), again broken off before the blade, came from a second-century context in the RBII interior. At least three other broken sockets from unknown implements (Nos. 2585, 3470, 3752) were also recovered from the settlement. All probably came from early first-century contexts, like the majority of the weapons and associated fittings.

Three conical ferrules were found. The largest (No. 3108), from a

first-century pit next to an early Roman enclosure, and another from the edge of the gully in PG9 within the area of RB Cemetery I (No. 3853) are of comparable diameter. The third (No. 3002), found at the surface of a mid first-century pit, is half the size of the others. These examples had been attached to hafts of significantly differing diameter suggesting they came from implements of varying use. Conical ferrules are found in both military and civilian contexts. It is often noted that while they may have been used at the end of a spear shaft, they may also have been used on any other long hafted implement, though why other implements would require such a ferrule at the butt is not stated.

Fe 3371 (88N/515E, clearing). Iron possible double-edged blade or strap with pointed tip, other end broken, badly flaked, section lost. L. 140mm, W. 40mm.

*Fe 3020 (961.8N/655.8E, Ditch clearing). Iron projectile with double-edged leaf-shaped blade of lentoid section, narrow neck and round-sectioned socket. L. 105mm, blade L. 62mm, W. 28mm, socket Diam. 12mm.

*Fe 2668 (205S/430E, Well 7, fill AB, depth 12–36"). Iron projectile with slender double-edged blade of lentoid section, narrow neck and round-sectioned socket. L. 98mm, blade L. 60mm, W. 13mm, socket Diam. 12mm.

*Fe 3476 (1161N/499E, Central Enclosure outer ditch, Level 1, depth 0–6"). Iron broken socket of round section with minerally replaced organic remains within. L. 75mm, Diam. 18mm.

*Fe 3477 (170N/360E, RBII Inner, Level 1, depth 0–6"). Iron nailed split socket with slender neck broken before the blade. L. 72mm, Diam. 20mm.

Other Broken Sockets

Fe 2585 (1053N/625E, Well 4, pit baulk light fill, depth 6–9"). L. 42mm, Diam. 18mm.

Fe 3470 (1168N/138E, Banjo area ditch B1, Level 1, depth 0–3"). L. 88mm, Diam. 22mm.

Fe 3752 (906N/219E, pit, Level 2). L. 40 mm, Diam. 20 mm.

Fe 3108 (454N/75E, pit, Level 4). Iron conical ferrule with split socket and round section. L. 157mm, Diam. 32mm.

Fe 3002 (865N/206E, pit, surface scraping). Iron conical ferrule of oval section, fractured. L. 85mm, Diam. 36mm.

Fe 3853 (263.7N /141W, PG9, edge of gully, surface). Iron conical ferrule of round section. L. 45mm, Diam. 18mm.

Two small iron buckles and a fragment broken from a possible third example of slightly larger size are likely to have come from armour. The two small buckles, one with a 'D'-shaped frame (No. 3357), the

other oval (No. 3467), are comparable with others of mid first-century date from *lorica segmentata* found at Hod Hill (Manning 1985, 147, T4-5). The 'D'-framed buckle (No. 3357) comes from a first-century deposit. A pin articulating with a fragment of round wire frame (No. 1736), found in a natural hollow, may be broken from a buckle or a penannular brooch, better considered with the other iron brooches (Haselgrove, this vol.). Four, larger, iron buckles with angular frames and other buckle pins recovered from the site come from horse harness of more recent date.

Fe 3357 (387N/344E, RBI, Level 1, depth 0-6"). Iron small 'D'-shaped buckle frame of round section and pin. Frame L. 14mm, W. 16mm, pin L. 18mm (measured from radiograph).

Fe 1736 (900N/352E, Natural hollow, Level 3, depth 6-9"). Iron round-sectioned pin articulating with a fragment of round-sectioned ring. L. 38mm, ring Diam. 5mm.

Dress Accessories

A penannular ring with scrolled terminals (No. 3458) from a later first- or early second-century deposit in RBI may be the distorted frame of a large brooch but the alternative identification as a ring handle is valid. A large annular ring and pin (No. 3466) that may also represent a penannular brooch of large size was found in a ditch, while a possible pin (No. 3300) from another came from the Banjo: these are perhaps better considered along with other items of horse harness and are reported on below.

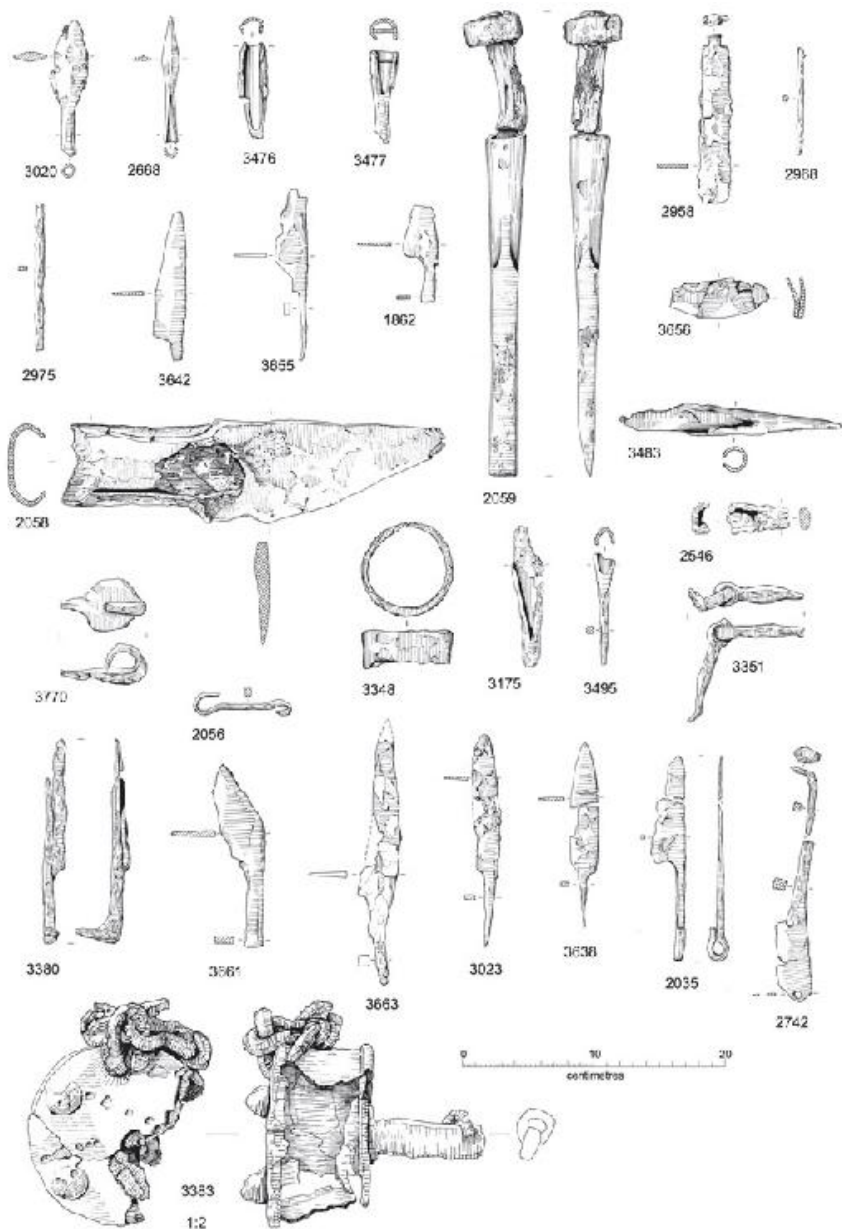


Figure 3.6. Iron small finds (I).

Fe 3458 (383.4N/146E, RBI, loam, Level 1, depth 0–6"). Iron penannular ring of round section with scrolled terminals. D. 74mm, terminal W. 16mm.

Hobnails

More than 300 hobnails were recovered, at least 40% from the Central Enclosure. Hobnails were used on shoes of nailed construction, the most commonly used shoe type in Roman Britain. They were also used to reinforce the soles of shoes of stitched construction and sandals. Personal observation suggests that shoes of other constructions which have their soles reinforced by the addition of hobnails occur in numbers from London and, less frequently, larger urban centres elsewhere in the country but rarely in rural settlements, presumably where 'surfaced' roads were uncommon. It is likely that at Mucking the hobnails principally come from shoes of nailed construction, an exclusively Roman shoe type and a feature that demonstrates the degree of adoption of Roman 'culture' by the local population. No definite hobnails were recovered from Later Iron Age or earlier contexts. A number were recovered in groups, suggesting the deposition of whole shoes; these are detailed below.

Fe 3861 (140N/60W, from ?dump out of N-S ditch in 'A' enclosure, Level 0). Four hobnails with minerally-replaced organic leather.

Fe 2861 (370N/140E, RBI, dark loam, Level 2). Minimum of 40 hobnails with minerally-preserved organic leather.

Fe 3368 (460N/170E, junction of RBI and later ditch, Level 1). Eleven hobnails with minerally-replaced leather.

Fe 3363 (885N/544E, Central Enclosure outer ditch, Level 5). Twenty-six hobnails with minerally-replaced leather. Shank L. 10–20mm, head Diam. 10–30mm.

Fe 3353 (885N/545E, Central Enclosure outer ditch, Level 7). Eleven hobnails and hobnail fragments with minerallypreserved organic leather.

Fe 3366 (930N/450E, Central Enclosure outer ditch, Level 6). Seven hobnails with minerally-replaced organic leather.

Fe 2598 (950N/740E, Well 6, Level 20). Minimum of seven hobnails with minerally-replaced organic leather.

Fe 2606 (950N/740E, Well 6, Level 17). Hobnail fragments with surrounding soil and minerally-replaced organic leather.

Fe 3019 (1394N/616E, Ditch extending N from Central Enclosure, Level 3). Twenty-two hobnails.

Fe 3030 (1394N/616E, Ditch extending N from Central Enclosure, Level 3). Twenty-six hobnails.

Literacy

A single stylus (No. 3013) was recovered when clearing Ditch B5, in a context likely to date to the first century AD. The stylus, of Manning

type 2 (Manning 1985, 85) has a short stem and a distinct point. While one might expect more iron styli to have been recovered from a settlement of this size and duration, the mass radiography of the iron assemblage makes it unlikely that other examples have remained undetected. Although no definite copper alloy styli were identified, at least one seal-box (see Appleby above) supports the slight evidence for literate activity.

Fe 3013 (1122N/238E, Ditch B5, clearing, Level 0). Iron stylus with short stem expanding to form a simple eraser, distinct shoulder and slender point. L. 66mm, eraser W. 12mm.

Occupations, Industry and Craft

A large, socketed, mortise chisel (No. 2059) with remains of a wooden handle bound at the top with a collar ferrule was found in the second-century fill of Well 4. The ferrule-bound, socketed handle indicates that the chisel had been hit with a hammer, thereby suggesting heavy use. The mortising chisel was in common use as a general purpose tool by the Roman craftsman (Manning 1985, 23) and is of a type known as a 'registered' chisel today.

A small flat-bladed chisel (No. 2958) with a short tang, burred by hammering, was found in a later first- or second-century AD fill in the RBI ditch. A chisel with the head also burred by hammering (No. 3161) came from a second-century pit fill located within the RBII enclosure. A smaller implement with a round-sectioned stem (No. 2271) appears to be a small chisel or punch for working hot metal. It came from a second-century AD deposit in a gully running up the centre, and possibly associated with, RB Structure 9. Another (No. 1111), a small chisel or tracer of rectangular section, was found in the 'Kiln Ditch' in a context dating no earlier than the later second century AD.

A punch (No. 1615), with its head slightly burred by hammering, was found in a second-century fill in Well 4. Two other punches comparable with smith's punches from Niederbieber (Gaitzsch 1980, taf. 45, 215, 220) were found, one in a late first- or second-century deposit (No. 3048), the other (No. 3171) from a structure (Masonry Building A) of second-century or possibly slightly later Roman date. A fragment broken from an example of slightly thicker section (No. 2876) came from a first-century context. A square-sectioned shank with an expanded terminal bent at right angles to the shank (No. 3321) came from a ditch probably associated with the RBII enclosure, from a context probably of second-century date. These shanks are found in small numbers at several Romano-British settlements (Mould 1997, 83) and appear to be the handling rods used by the smith to

grip an object with tongs during manufacture, and later snapped off the finished product and discarded.

*Fe 2059 (1050N/530E, Well 4, Level 24). Iron large, socketed chisel with bevelled blade of rectangular section. Remains of the round-sectioned wooden handle with a collar ferrule. L. blade 238mm, handle c. 90mm. W. blade 19mm, socket Diam. 27mm, ferrule Diam. 38mm.

*Fe 2958 (157N/210E, RBI late fill, Level 0). Iron small, flat-bladed chisel with parallel-sided, flat blade, distinct shoulder and short, centrally-placed, rectangular-sectioned tang slightly burred by hammering. L. 131mm, W. 25mm.

Fe 3161 (320N/450E, pit, Level 2, depth 3–6"). Iron chisel with rectangular-sectioned, burred head and remains of the flat chisel blade, much flaked. L. 85mm, head W. 19mm.

Fe 1615 (1050N/622E, Well 4 dark fill, Level 13, depth 36–39"). Iron punch of round section with slightly burred head and pointed tip, tip section much flaked. L. 132mm, Diam. 10mm, head Diam. 14mm.

Fe 3048 (285N/310E, RBI loam, Level 1). Iron punch as 1615 above. L. 139mm, Diam. 11mm.

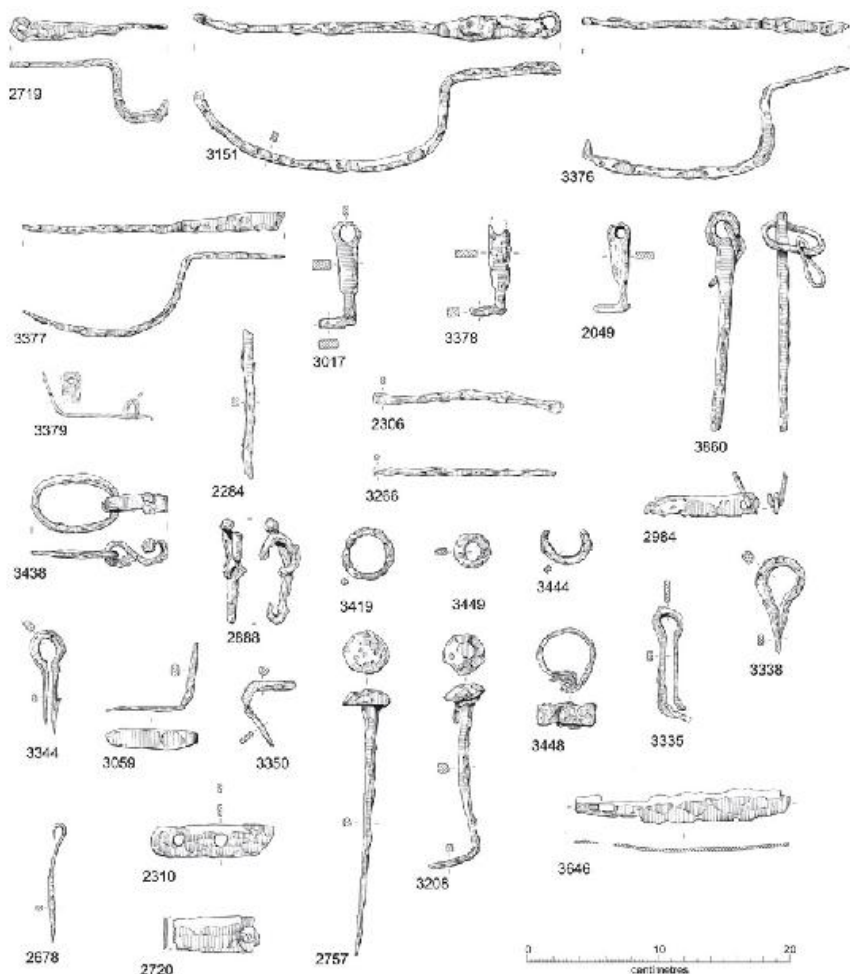


Figure 3.7. Iron small finds (II).

Fe 3171 (176N/182E, Masonry Building A, Level 2). Iron punch with pointed tip. L. 165mm, Diam. 15mm.

Fe 2876 (420N/90E, RBIII, Level 4). Iron punch fragment with round section. L. 60mm Diam. 18mm.

Fe 2271 (303N/265E, Pit at N end of gully, Level 1, depth 0–6"). Iron chisel with round-sectioned stem, changing to a rectangular section at one end. L. 106mm W. 11mm.

Fe 1111 (125N/530E, Kiln Ditch, Level 2). Iron chisel, rectangular sectioned stem tapering to a straight-ended tip. L. 68mm, W. 9mm.

Fe 3321 (235N/400E, Ditch in RBII area, Level 1, depth 0–6"). Iron handling rod of angular section with bent over, flattened head. L. 50mm, head W. 24mm.

The rectangular butt may come from an axe or heavy hammer head (No. 3324). A fragment broken from a saw blade (No. 2242) came from RBI South in a first- or second-century context. A drill bit (No. 3323) that appears to be a simple pointed bit (Manning 1985, 26, fig. 5.1), though it tip. L. 68mm, W. 9mm. Fe 3321 (235N/400E, Ditch in RBII area, Level 1, depth 0–6"). Iron handling rod of angular section with bent over, flattened head. L. 50mm, head W. 24mm. is heavily flaked, was found in RBI and is of similar date.

Fe 3324 (1134N/216E, butt of small ditch cut by Ditch B5). Iron rectangular butt projecting into two side wings to form a large oval eye. L. 52mm, W. 35mm, Th. 30mm.

Fe 2242 (265N/300E, RBI South, Level 1). Iron saw blade fragment. L. 26mm, W. 40mm.

Fe 3323 (285N/305E, RBI, Level 1, depth 0–6"). Iron drill bit with square-sectioned head, long stem and pointed tip. L. 154mm, head W. 9mm.

TEXTILE PROCESSING

A long stem (No. 2308) from a first-century AD context is an iron spindle. While the majority of spindles are likely to have been made of wood, iron spindles like this example are unlikely to have been as rare as they appear at present. The general adoption of mass radiography of ironwork will enable this category of object to be recognised more readily. A single iron needle (No. 2968) and a possible netting needle or simple bobbin or shuttle (No. 2975) were found in RBI in second-century fills. The implement (No. 2975) with two forked terminals varies from those netting needles found in both Roman and medieval contexts elsewhere, having a relatively thick, angular section rather than a slender round-sectioned stem, and notched, rather than deeply forked, terminals. Nevertheless, it could be used as a spacer to create a mesh of uniform size, around which the thread or cord of the mesh could be wound, and is of similar size. Similar tools with larger forked ends were used for making mess nets in recent times (Blandford 1974, 197 and fig. 37, P & Q). No well preserved shears were recovered from the settlement. Five blades may come from shears but their identification can only be tentative. Two blades come from first-century contexts (Nos. 3009 & 3654), two from second-century contexts (Nos. 3642, 3655) while the smallest example (No. 1862) was in a context of the second century or later.

Fe 2308 (658N/381E, pit, Level 2, depth 6–12"). Iron broken spindle with long round-sectioned stem, expanding in section at the point of fracture. L. 280mm, Diam. 7mm.

*Fe 2968 (150N/240E, RBI late fill, Level 0). Iron needle with slender, oval stem with long elliptical eye, point broken. L. 81mm, Diam.

4mm.

*Fe 2975 (150N/220E, RBI late fill, Level 0). Iron netting needle or bobbin with rectangular section and bifurcated terminals. L. 115mm, W. 9mm.

*Fe 3642 (1166N/225E, pit (cuts Ditch B4), Level 1). Iron shears with triangular blade and fragment of broken spring (not illustrated). L. 115mm, blade W. 23mm.

*Fe 3655 (430N/255E, RBI loam, Level 1, depth 0–6"). Iron shears blade with convex back and shouldered edge with rectangular-sectioned tang broken at the spring. L. 131mm, blade W. 25mm.

*Fe 1862 (1486N/615E, Ditch extending N from Central Enclosure, Level 1, depth 0–3"). Iron broken triangular blade with straight edge and fragment of the flat strap spring. Blade L. 50mm.

Fe 3009 (1110N/878E, Ditch E1 baulk, Level 1, depth 0–3"). Shears fragment with long slender tang set in line with blade with straight back. L. 106mm, W. 20mm, tang L. 70mm.

Fe 3654 (354N/334E, RBI loam, Level 2, depth 6"–btm of charcoal). Small blade with bulging back and edge. The long square-section tang is in line with the back and suggests that the blade is from a set of shears. L. 121mm, W. 22mm, tang L. 72mm.

MISCELLANEOUS TOOLS

The cranked tang of a small trowel (No. 3229) came from a first-century ditch context within the Central Enclosure. If not intrusive in the context, its recovery implies work on a masonry structure, as do the spatulas (No. 2276) and 'T'-staples (Nos. 1439, 3354) mentioned below. Two spatulas (No. 2276), modelling tools used to work soft, plastic materials such as clay and plaster, were found together in RBI, also in a first-century context. They fall into type 1 of Manning's classification (Manning 1985, 31, fig. 1); he noted that they were rarely recovered from locations outside London. While they still appear to be uncommon finds, they are occasionally recognised elsewhere due to the adoption of mass X-radiography of archaeological ironwork.

Fe 3229 (1033N/629E, Ditch, Level 2, depth 3–6"). Iron trowel, part of rectangular-sectioned cranked handle and beginnings of flat blade.

Fe 2276.1 (345N/330E, RBI baulk). Iron modelling tool with rectangular-sectioned stem with a spatulate, straight-ended blade at one end and a point at the other. L. 114mm, blade W. 12mm.

Fe 2276.2 (345N/330E, RBI baulk). Iron modelling tool, as above, with pointed terminal in opposite plane to the blade. L. 90mm, blade W. 9mm.

TOOLS OF UNCERTAIN USE

Two tools with serrated teeth, though clearly not saw blades, were found. One (No. 3479) from a later first-century fill in the inner ditch of the Central Enclosure had a small open socket with minerally preserved remains of the handle within. The other (No. 3328), from a pit fill of similar date, was tanged, and also had minerally preserved remains of the handle present. A similar tool with a closed socket was found at Niederbieber (Gaitzsch 1980, taf. 50, 254) and has been described as a scraper.

Fe 3479 (848N/680E, Central Enclosure inner ditch baulk, Level 1). Iron scraper with serrated edged blade and small open socket with minerally preserved organic remains. L. 50mm, blade W. 30mm, socket Diam. 18mm.

Fe 3328 (758.2N/150E, pit, Level 2, depth 3–6"). Iron scraper, fragment of blade with convex edge with heavily serrated teeth and a centrally-placed, square-sectioned, broken tang. L. 72mm, W. 42 mm, tang L. 18mm.

Agricultural Implements

An asymmetrical flanged plough-share (No. 2058) of Rees type Id (Rees 1979, fig 49, 154) came from near the excavated base of Well 4, alongside a few sherds of later first- to earlier second-century pottery. Minerally preserved wood present in the socket suggests that at least part of the plough had been thrown or placed in the well rather than just the share. Other examples from Dinorben, Chester, Brading and Folkestone appear to come from late third- or fourth-century contexts, though the latter came from a deposit dating from the end of the first to the mid fourth century (*ibid.*, 57). A small plough share tip (No. 3175) comparable to an example from Silchester (Rees 1979, fig. 53a) came from a second-century pit within RBII, and a second possible example (No. 3483), from the ditch extending south from the southeast corner of the North Enclosure, is also likely to be of Roman date. The tip of this example (No. 3483) is slender and sharply pointed, and it may have served a similar function to the implements described below (Nos. 3499, 3480); if it was a plough share tip it had hardly been used. Small, socketed iron shares of this type, Rees type 1a, were in use from the early Iron Age and continued into the Roman period (Rees 1979, 54). The short type 1a shares most closely comparable to these two Mucking examples are thought to be of Roman date, though only two from Coygan Camp in Dyfed are closely datable to the late third century. Two long socketed points for sheathing more slender wooden points were recovered: one (No.

3499) from the second-century Kiln 4 pit, the other with a nailed socket (No. 3480) from a first- to third-century context. They may be the iron tips from wooden pitch forks (cf. Rees 1979, 483); one (No. 3499), being gently curved at the tip, is well suited to be the tip of a hay fork. A third example (No. 3495), though only half the size, may have had a similar use. It came from a second-century deposit also.

A large, round-mouthed spadeshoe (No. 3373), with minerally replaced remains of the oak wood spade within the groove, came from a lower fill of Well 4 (just above the plough share). A small fragment from a second example (No. 3656) was found in a hollow in a context of first-century date. The fragmentary remains of a large curving blade with a thickened back broken from a scythe or sickle (No. 3150) came from a second-century fill in RBI. A fragment from another (No. 3325) was also found in RBI. A curved blade (No. 3315) with a slightly thickened back came from a pit and a small piece broken from a blade with a thickened back (No. 3801) came from an early first-century ditch. Whether they were broken from scythe or sickle blades is uncertain. Two curving blades with open sockets were found, one (No. 3031) from a first-century context in Ditch B39, the other (No. 3316) from a second-century context in the 'Enigma' pit. As both blades and sockets are broken their size is unknown and their exact use uncertain. They fall into the category of pruning hooks of type 1A of Rees classification (Rees 1979, 461) or reaping hooks or small hooks of Manning's type 2 (Manning 1985, fig. 14). They are likely to have been used to harvest cereals and cut small branches to provide fodder for livestock. An open socket (No. 2546) formed by folding over two side wings may come from another example; this was found in the second-century upper fill of Well 4.

Fe 3373 (1050N/630E, Well 4, 24'6" deep). Iron spadeshoe with large round mouth, both arms broken. L. 220mm, W. 70mm (blade depth), groove W. 20mm.

*Fe 3656 (1160N/236E, pit/hollow, Level 1, depth 0-6"). Iron spadeshoe fragment of curved, flanged blade. L. 76mm, W. 31mm.

*Fe 2058 (1050N/630E, Well 4, 25'9" deep). Iron plough share with asymmetrical flanged blade with triangular section, worn along the edge and at the top, and open socket with mineral-preserved wood present. L. 285mm, blade W. 78mm, socket Diam. 62mm.

*Fe 3175 (206N/380E, pit within RBII, Level 1). Iron plough share with split socket and central, rectangular-sectioned tang. L. 108mm, Diam. 26mm.

*Fe 3483 (1605N/1010E, North Enclosure SE Ext ditch, Level 8/9, depth 21-27"). Iron plough share with long round-sectioned tip and flat-sectioned tang. L. 168mm Diam. 26mm.

Fe 3499 (742N/367E, Kiln 4 pit, Level 6, depth 30–36"). Iron long, socketed point of round section tapering to a gently curving tip. L. 210mm, Diam. 30mm.

Fe 3480 (512.3N/428E, pit, Level 0). Iron long, socketed point of round section with split socket, nailed. L. 196mm, Diam. 30mm.

*Fe 3495 (393Nx154E, ditch cutting RBI, Level 0). Iron socketed point of round section with open socket. L. 87mm, Diam. 18mm.

Fe 3150 (160N/210E, RBI late fill, Level 1). Iron fragments of narrow, curving blade with thickened back. Largest L. 215mm, blade W. 30mm, back Th. 10mm.

Fe 3801 (940N/172E, Ditch B3, Level 0). Iron blade fragment with thickened back. L. 44mm, back Th. 8mm.

Fe 3325 (387N/344E, RBI Box, Level 2). Iron curved blade fragment with thickened back. L. 87mm, blade W. 21mm, back Th. 6mm.

Fe 3315 (756N/373E, pit cutting Kiln 4). Iron curving blade with slightly thickened back. L. 128mm, blade W. 32mm, back Th. 4mm.

Fe 3031 (797N/220E, Ditch B39, Level 1, depth 0–3"). Iron small curved blade, broken, with remains of open, nailed socket. L. 64mm, blade W. 25mm.

Fe 3316 (373N/505E, Enigma baulk). Iron small curved blade, broken, with broken open socket. L. 83mm, blade W. 45mm.

*Fe 2546 (1051N/642E, Well 4, Level 9, 24–27" deep). Iron small open socket, formed by folding over paired side wings, with beginnings of implement of rectangular section. L. 48mm.

Transport

CART FITTINGS

The head of a small linch pin (No. 3770) of Manning type 2b, (Manning 1985, 74 and fig. 20), the most common form of this Romano-British fitting, was found in the second-century upper fill of Well 4. One might have expected linch pins to be better represented; at least eight were found at the settlement at Dragonby in Lincolnshire, for example (Manning & MacDonald 1996, 295–7). An axle guard or pole binding (No. 3500) with a projecting, pierced flange was found in a pit of uncertain date. It is comparable with a pair found together on the floor of room N3 at Fishbourne (Cunliffe 1971, 134) and another from the Sandy Hoard (Manning 1985, H47, 74–5). The precise use of these cart fittings has been discussed by Manning (*ibid.*). A possible wheel hub lining (No. 3348), was found in a late first-century AD fill of Ditch B2. It is smaller in diameter than other hub linings, which appear to measure in excess of 100mm in

diameter, and may perhaps be better considered as a simple collar, an object commonly found on Roman sites (see below miscellaneous fittings). Alternatively, if it was indeed a hub lining from a particularly small wheel, the narrow strap would suggest it to be of Iron Age date (*ibid.*, 71).

*Fe 3770 (1049N/633E, Well 4 central loam A–B, Level 6). Iron linch pin with flat, spatulate head with turned over loop and broken shank. L. 65mm, head W. 40mm.

Fe 3500 (203N/396E, pit in RBII/GH area, Level 0). Iron axle guard, cylindrical strap collar with centrally-pierced projecting flange. L. 112mm, Diam. 95mm.

*Fe 3348 (1090N/180E, where modern ditch cuts Ditch B2, Level 1, depth 0–6"). Iron heavy collar of rectangular-sectioned strap. D. 70mm, W. 26mm.

HORSE HARNESS

A snaffle bit with two articulating links (No. 3351) was found in an undated pit. Individual bit links came from two second-century AD contexts, the fill of Well 4 (No. 2056) and the cleaning of the Kiln ditches (No. 1546), as well as a possible Anglo-Saxon deposit in the Northern Enclosure ditch (No. 3033). Two items (Nos. 3466 & 3300), apparently from large brooches or buckles, may come from harness. A large ring (No. 3466) was found associated with a curved stem in later first-century AD infill in Ditch A2N. Thought to be a large annular brooch or buckle when first excavated, it may be a broken link and side ring of a snaffle bit (*cf.* Manning 1985, H15, 67 and pl. 29). The use of iron to make a decorative item of this size would appear unlikely though a small proportion of bow and penannular brooches, buckles, bracelets and finger rings were made of iron. Similarly, a round-sectioned stem with a looped terminal and a distinctly curved profile (No. 3300) from a probable first-century AD deposit in the Western Enclosures may be a bit link rather than the pin from a large brooch or buckle.

*Fe 3351 (385N/522E, pit, Level 1, depth 0–6"). Iron snaffle bit with two articulating links of round section. L. 115mm.

*Fe 2056 (1050N/634E, Well 4, Level 41/42, 120–26" deep). Iron snaffle bit link of square section with looped terminals in opposite planes. L. 74mm.

Fe 1546 (140N/550E, Kiln ditch clearing). Iron snaffle bit link of square section. L. 79mm.

Fe 3033 (1890N/302E, North Enclosure N baulk secondary, Level 4, depth 9–12"). Iron snaffle bit link of square section. L. 73mm.

Fe 3466 (915N/418E, Ditch A2N, Level 1, depth 0–6"). Iron large ring and gently curved, round-sectioned stem. Diam. 88mm, pin L. 71mm.

Fe 3300 (1225N/150E, Ditch B15, Level 2, depth 6–12"). Iron round-sectioned stem with looped terminal, pointed tip and humped profile. L. 87mm, Diam. 8mm.

Household Furnishings and Equipment

KNIVES

Knife blades were well represented on the settlement and ranged from heavy blades probably associated with butchery to smaller, multi-purpose, domestic utensils. At least 30 knives or broken knife blades were noted from Roman contexts. Like much of the settlement iron, the knives and broken blades came principally from first- and second-century contexts, but the proportion (over 20%) coming from deposits of second-century date was notable. Two small fragments of blade (Nos. 3250 & 3256) were present in contexts of third-century date. In addition, two broken knife tangs (Nos. 1212 & 3658) were found in first-century AD deposits.

A heavy knife with a sturdy, arched blade and thick tang (No. 3661) came from a first-century pit. It corresponds to type 8 of Manning's knife classification of cleavers (Manning 1985, 113, fig. 28) but differs in having a convex rather than a straight edge. It appears to be an uncommon type. The few examples cited by Manning are all of mid first-century date. A large but narrow blade (No. 3034) with the back curving upward may be considered either a large knife of Manning type 23 (*ibid.*, 118) or possibly a small cleaver of his type 1. This hollow-backed form is an Iron Age type that continued in use into the Roman period. The knife can be paralleled by another from Hod Hill in the Durden Collection dating to the Iron Age to mid first century (*ibid.*).

Knives with tangs that continued the line of the back, and knives with tangs placed centrally between the back and edge, were present. A knife with a leaf-shaped blade (No. 3663) came from a first-century pit; others with straight blades (Nos. 3023 & 3638) came from first- and second-century ditches. A knife with a tang with a ring terminal (No. 2035) of Manning's type 11b (Manning 1985, 114) came from the second-century fill of Well 4. A small blade (No. 935) of similar shape, of Manning's type 11a, came from a first-century ditch. One knife blade (No. 3639) of a recognisably Anglo-Saxon type was found in a second-century context within a timber building. While it is most likely to be of Anglo-Saxon date, two knives of similar type have been found in Roman contexts elsewhere, one from Great Wakering in Essex and the other from Hod Hill (Manning type 19, 1985, 117).

*Fe 3661 (720N/392E, pit, Level 1). Iron heavy blade with thick, rectangular-sectioned tang. The blade back drops steeply down to join the convex edge at a pointed tip. L. 140mm, blade W. 35mm.

Fe 3034 (986N/447E, Central Enclosure inner ditch A1A, Level 3, depth 12–18"). Iron knife with square-sectioned tang set on line with the concave back, upward pointing tip and worn edge. L. 210mm, blade W. 36mm.

*Fe 3663 (1316N/374E, pit, Level 1, depth 0–3"). Iron knife with convex back and edge and centrally-placed tang. (Original) L. 206mm, blade W. 30mm.

*Fe 3023 (1299N/206E, where modern ditch cuts Ditch B6, Level 2, depth 6–12"). Iron broken knife with a straight back curving down to meet the straight edge at the tip. L. 165mm, blade W. 20mm.

*Fe 3638 (373N/489E, Enigma, Level 2, depth 3–6"). Iron broken knife with centrally-placed tang and blade with a straight back and edge. (Original) L. 145mm, blade W. 20mm.

*Fe 2035 (1041N/639E, Well 4 dark fill, Level 10). Iron knife with triangular blade with slightly sinuous back, square-sectioned tang with curled loop terminal. L. 155mm, blade width 27mm.

Fe 935 (1215N/131E, Ditch B1, Level 2, depth 3–6"). Iron knife with straight tang on line with the straight back of the triangular blade with a worn edge. L. 60mm, blade W. 22mm.

Fe 3639 (280N/282.6E, RB Structure 9, Level 1). Iron knife with small blade with 'kicked' back dropping to meet the straight edge at a pointed tip, and central rectangular-sectioned tang. L. 91mm, blade W. 25mm.

Fe 2985 (1654N/828E, North Enclosure ditch baulk from late loam, Level 2). Small iron knife blade with centrally-placed tang, straight back and convex edge. L. 78mm, blade W. 21mm.

Fe 2936 (156N/354E, RBIII, Level 2). Two fragments of knife blade and tang fragment. Blade has a straight back which tapers to meet the straight edge at a long pointed tip. Minerally-replaced organic on the tapering rectangular section tang is identified as ash (*Fraxinus*) or oak (*Quercus* sp.). L. 70 mm, blade W. 23mm, tang L. 33mm.

Fe 3163 (252N/300E, RBI south surface scrape). Small iron knife blade with remains of rectangular-section tang centrally placed between the straight back with a sloping shoulder and the straight edge tip; much of the edge is now missing. L. 60mm, blade W. 15mm, tang L. 15mm.

Fe 3637 (375N/145E, RBI late fill, Level 1). Iron knife blade; square-sectioned tang in line with the straight-backed fragment of blade. L. 56mm, blade W. 28mm, tang L. 22mm.

Fe 3648 (1040N/760E, clearing). Small iron knife blade with straight back; edge is now lost. Tang appears to have been on line with the back; tip is missing. L. 47mm, blade W. 19mm.

*Fe 2742 (383N/522E, pit, Level 2 bottom). Blade with square-section tang on line with back.

Broken Blades

Fe 1778 (945N/216E, Ditch B43, Level 1).

Fe 1823 (1650N/847E, North Enclosure, Level 7, depth 33–39”).

Fe 1871 (1033N/629E, Ditch A3A, Level 2, depth 3–6”).

Fe 2025 (550N/680E, clearing).

Fe 2033 (1067N/281E, pit, Level 2, depth 3–6”).

Fe 2226 (304N/314E, RBI, ?base of late loam, Level 2, depth 6–12”).

Fe 2232 (449N/442E, pit).

Fe 2277 (431N/445E, pit, Level 1, depth 0–6”). Narrow blade.

Fe 2283 (586.6N/377E, Ditch F3B).

Fe 2418 (472N/61E, PG25 baulk, Level 1).

Fe 2504 (1870N/830E, clearing).

Fe 2608 (950N/740E, Well 6, centre brickearth fill, Level 18).

Fe 2694 (358N/529E, pit, black loam).

Fe 2987 (647N/544E, intersection of pit and ditches, Level 1, depth 0–3”).

Fe 3250 (730N/150E, pit, Level 1, depth 0–6”).

Fe 3256 (494N/537E, pit, Level 1, depth 0–3”).

Fe 3342 (1207N/518E, Ditch A2B, Level 3, depth 14–17”).

Fe 3301 (133N/170E, clearing).

Fe 3653 (1259N/276E, pit, Level 2, depth 3–6”).

Fe 3660 (1249N/170E, Ditch B6, Level 1, depth 0–6”).

Knife Tangs

Fe 1212 (860N/731E, Central Enclosure inner, clearing).

Fe 3658 (285N/305E, RBI, Level 2, depth 6–12”).

LATCH-LIFTERS

Latch-lifters were used in the Late Iron Age and throughout the Roman period (Manning 1985, 88). Six well-preserved examples were found at Mucking. A latch-lifter (No. 3384) with a swan-necked, ring handle and a pronounced curved profile came from the west side of the North Sub-Enclosure causeway, and is likely to be of Roman date, despite its apparent Late Iron Age context. It is comparable to a latchlifter from Great Chesterford that also has a rather curved neck

(Manning 1985, pl. 39, O20). A second latch-lifter with a crescentic profile (No. 3375) came from the outer ditch of PG102, a feature dating to the Early/Middle Iron Age. Latch-lifters were in use from the Late Iron Age onward and the latch-lifter is likely to be of Late Iron Age or early Roman date. Both these are reported on in the Prehistory Volume. The four other examples (Nos. 2719, 3151, 3376 & 3377) come from Roman contexts, all datable to the first or second century. Each has a stem with a more flattened profile and a strap handle. The handle from a seventh latch-lifter or possibly a 'T'-shaped lift key (No. 3014) was found during clearing.

*Fe 2719 (1040N/631E, Well 4, dark fill C). Latch-lifter with crescentic profile with upturning tip, strap handle and curled loop terminal. L. 120mm.

*Fe 3151 (150N/250E, RBI, Level 0). Latch-lifter with shallow profile with upturned tip, strap handle and pierced ring terminal. L. 285mm.

*Fe 3376 (1438N/427E, Ditch B23, Level 3, depth 6–9"). Latch-lifter with shallow profile with upturned tip, strap handle and broken ring terminal. L. 210mm.

*Fe 3377 (1122N/314E, Ditch B27, Level 2, depth 3–6"). Latch-lifter as 3376 above. L. 202mm.

Fe 3014 (980N/830E, clearing). Slender-shouldered stem with rectangular section and looped ring terminal: bow and stem of latch-lifter or key. L. 99mm, W. 8mm, terminal W. 11mm.

LOCKS AND KEYS

Items associated with security were relatively well represented at the settlement. A small rotary lever lock padlock with a cylindrical case (No. 3383) was recovered from primary fill in the southeastern corner of the North Enclosure, at the intersection with a Roman field-ditch. While the padlock was recovered from a potentially Iron Age context, a coin of AD 260–8 occurred in the upper levels, suggesting that the lock derives from a Roman deposit. It is similar to another found in a pit in room 15 at Lullingstone that can be securely dated to AD 330–50 and another from Verulamium in occupation debris in a cellar dated to AD 280–315 (Manning 1972, fig. 67 no. 71). A lock bolt (No. 3018) was found in the northeast corner of the North Enclosure ditch. The remains of a sprung hasp (No. 2051) comparable with those used to secure the burial caskets BXXX and BXLV at Skeleton Green, Puckeridge dating to the Antonine period (Partridge 1981, 317) was found in Well 4. A bolt from a barb spring barrel padlock (No. 3380) came from a pit with a third- or fourth-century fill, while the barbed spring (No. 1805) from another came from a first-century context in

RBI.

A broken bit from a "T"-shaped tumbler lock lift key (No. 3305) came from the Central Enclosure outer ditch. A tumbler-lock slide key (No. 3382), a rather heavy example similar to another from Verulamium (Frere 1972, 77, fig. 68), was found in the Central Enclosure inner ditch in a first-century deposit, as was another slide-key (No. 3378). Other slide keys came from second-century contexts in the outer ditch of the Central Enclosure (No. 3017) and Well 4 (No. 2049). Tumbler lock lift and slide keys are commonly found on Romano-British occupation sites. A lever lock key with a piped stem (No. 3021) was also recovered from the inner ditch of the Central Enclosure. While having the appearance of a Medieval key type, its recovery from a first-century context and the occurrence of a Roman rotary lever lock mechanism from Mucking (No. 3383) above from a potentially Iron Age deposit, all suggest that the key may be of early Roman date. A small casket key (No. 3381), of a type also in use in medieval and more recent times, came from a first-century context, in Ditch B27. The fragmentary remains of a barb spring barrel padlock key (No. 907) were found in first-century ditch fill of the Central Enclosure inner ditch. Two possible further examples (Nos. 1806, 2906) came from later deposits dating to the third to fourth century and the second to third century respectively.

*Fe 3383 (1620N/1015E, North Enclosure, SE corner at intersection with RB ditch, primary fill, depth 41"). Iron padlock with cylindrical case, the circular front and back plates are held together with large, dome-headed rivets, a rectangular sectioned stem with a link rises from the centre of one plate, while a link and three figure-of-eight chain links protrude from the lower part of the case. The remains of circular wards and part of the bolt can be seen in X-radiograph. D. 68 mm, case W. 36 mm.

Fe 3018 (1910N/1050E, NE corner of North Enclosure Ditch, Level 1). Iron lock bolt with two projecting ridges each pierced by a rectangular hole. L. 94mm W. 20mm.

Fe 2051 (1050N/622E, Well 4, Level 2, depth 3–6"). Iron sprung hasp strap with remains of two barbs welded to it. L. 105mm, W. 27mm.

*Fe 3380 (355N/473E, pit, Level 3, 6–9"). Iron barb spring barrel padlock bolt with remains of the spring and a fragment of the barb attached to one side. L. 158mm, W. 17mm.

Fe 1805 (195N/115E, RBI where it cuts South Outer Ring, Level 1). Incomplete remains of a barbed lock spring with two barbs. L. 56mm, W. 12mm.

Fe 3382 (1282N/572E, Ditch A1A, Central Enclosure inner, Level 2). Tumbler lock slide key with rectangular-sectioned shouldered handle

with pierced ring terminal and rectangular bit. L. 78mm, bit L. 32mm.

*Fe 3017 (829N/676E, Ditch A2B, Central Enclosure outer, Level 2, depth 3–6"). Tumbler lock slide key as above with square bit. L. 80mm, bit L. 28mm.

*Fe 3378 (838N/709E, Ditch A1A, Central Enclosure inner, Level 0). Tumbler lock slide key as above. L. 72mm, bit L. 26mm.

*Fe 2049 (1053N/624E, Well 4, dark fill C). Tumbler lock slide key as above. L. 70mm, bit L. 30mm.

Fe 3305 (942N/779E, Ditch A2B, Central Enclosure outer, Level 5, depth 12–15"). Key bit; three upstanding teeth and part of round-sectioned stem of a T-shaped tumbler lock lift key. L. 45mm.

Fe 3021 (1230N/841E, Central Enclosure inner, Level 1, depth 0–3"). Key with square-sectioned stem, lozengeshaped bow, and slotted bit with piped stem. L. 86 mm, bit L. 22mm.

Fe 3381 (1125N/365E, Ditch B27, Level 1, depth 0–6"). Iron casket key with round-sectioned piped stem, bit with two opposing clefts and a broken bow. L. 32mm, bit L. 17mm.

Fe 907 (1163N/832E, Central Enclosure inner, Level 1). Fragmentary barb spring barrel padlock key with flat strip stem and simple pierced bit. L. 110mm, bit W. 19mm.

Fe 2906 (140N/265E, RBI, late fill). Possible key stem.

Fe 1806 (124N/533E, Antler Ditch, Level 2, depth 3–6"). Probable key terminal. L. 45mm, W. 15mm, terminal W. 20mm.

OTHER HOUSEHOLD ITEMS

A bar with a pierced ring terminal articulating with two oval chain links (No. 3860) was found by the dragline close to a Romano-British ditch. A similar item (No. 3694) with a sliding loop came from the surface clearing of a first-century ditch and is comparable with a lamp suspension swivel of late Iron Age or early Roman date at Camerton (Jackson 1990, 65 and pl. 30, no. 285). While these fittings may be of relatively recent manufacture they might come from a number of chain related items found in the Romano-British settlement.

A furniture drop handle (No. 2982) was found in a first-century context. A large hasp (No. 3379) and a small angle binding (No. 2268), the latter from a first-century AD deposit in Ditch F15, are box-fittings. A large number of broken strap fragments and nailed bindings were also recovered from the settlement (not individually catalogued here) that may come from a variety of household items including boxes, the fittings from doors and shutters, and bindings from buckets and other stave-built vessels.

A variety of handles from domestic implements were found. Two straight, spirally twisted handles (Nos. 2284 & 2306) are likely to

come from implements associated with the hearth such as fire shovels, ladles or flesh hooks. Simple curved handles from buckets of varying size were recovered, one (No. 3447) from a small vessel, three others from larger buckets (Nos. 2279, 3226 & 3347). Fittings from such common vessels are difficult to date independently. While two come from first- or second-century deposits, another derives from a potentially post-Roman context: the handle from the smaller vessel (No. 3447) was found where a post-medieval ditch cuts a ditch of first-century date. A bucket handle strap (No. 2984) came from the inner ditch of the Central Enclosure in a first-century context.

*Fe 3860 (157N/109E, Dragline). Iron round-sectioned shouldered stem with pierced ring terminal articulating with two oval chain links. L. 173mm, link L. 52mm.

Fe 3694 (1130N/890E, Ditch E1, clearing). Iron roundsectioned stem with pierced ring terminal passing through the pierced ring terminal of a second curved stem. L. 145mm.

Fe 2982 (1091N/809E, Central Enclosure inner ditch, Level 1, depth 0–3"). Iron drop handle of round section with looped ring terminals. L. 68mm.

*Fe 3379 (302N/304E, pit, Level 1). Iron hasp with angled strap with pierced terminal and looped staple. L. 105/52mm, strap W. 23mm.

Fe 2268 (610N/545E, Ditch F15, Level 2, depth 3–9"). Iron angled box binding with pierced terminals. L47/45mm, arm W. 10mm.

*Fe 2284 (372N/507E, Enigma, Level 1). Spirally twisted handle. L. 114mm.

*Fe 2306 (449N/442E, pit). Spirally twisted handle. L. 147mm.

*Fe 3266 (155Nx225E, RBI, Level 10). Spirally twisted handle. L. 140mm.

Fe 2279 (448N/439E, pit, loam spread). Four iron fragments of flat strap handle with a rolled loop terminal. L. 98mm, W. 18mm.

Fe 3347 (379N/516E, pit cutting Enigma). Iron curving strap handle fragment with hooked terminal articulating with remains of a suspension ring. L. 77mm, W. 25mm, ring Diam. 33mm.

Fe 3447 (1304N/236E, Ditch B7B, Level 2, depth 3–9"). Iron handle of plano-convex section. L. 97 mm, W. 8 mm.

*Fe 2984 (844N/725E, Central Enclosure inner ditch, Level 1). Iron handle strap with pierced ring terminal articulating with part of a broken handle. L. 90mm, W. 20mm.

RINGS

An oval ring articulating with an 'S'-shaped hook (No. 3438) may

come from a pot chain. A second oval-shaped ring or link with a curved profile (No. 3441) came from a second- to third-century context. Two separate S-shaped links (Nos. 2908 & 3336) came from RBI and a figure-of-eight chain link (No. 3732) from surface clearing. A knobbed stem articulating with a broken ring may be a broken pot chain swivel (No. 2546).

Eight complete rings of round section were found in Roman contexts ranging in diameter from 25–50mm. A further ten broken examples were also present with a slightly greater range in diameter (21–62mm). It was notable that the rings occurred predominately in deposits dated to the first century. These rings may have performed a variety of uses including bridle and harness fittings and, in a domestic setting, simple handles, suspension rings for pot chains, lamp-hangers and the like.

*Fe 3438 (1110N/632E, where post-medieval ditch cuts Central Enclosure internal fence-line, Level 5, depth 12–15"). Iron oval ring of round section articulating with an 'S'-shaped hook of rectangular section. Total L. 100mm.

Fe 3441 (310N/428E, RBII annexe, Level 1, depth 0–6"). Iron oval ring or link with curving profile, broken. L. 67mm.

Fe 2908 (160N/205E, RBI late fill, Level 1). Iron link, roundsectioned stem with looped terminal, flattening into a hooked terminal at the other. L. 69mm.

Fe 3336 (295N/310E, RBI, Level 1, depth 0–6"). Broken link. L. 48mm.

Fe 3732 (Unlocated). Figure-of-eight chain link. L. 75mm, W. 16mm.

*Fe 2888 (210N/390E, area of RB Structure 11, Level 1). Iron round-sectioned stem with knobbed terminal articulating with a broken round-sectioned ring. L. 79mm, ring Diam. 33mm.

Complete Rings

Fe 2884 (340N/140E, RBI, Level 1, depth 10–15", Dark brown loam). Diam. 40mm.

Fe 3304 (400N/475E, area clearing). Diam. 42mm.

*Fe 3419 (955N/306E, Ditch B36, Level 1, depth 0–3"). Diam. 40mm.

Fe 3435 (967N/216E, pit, raw clay). Diam. 29mm.

Fe 3437 (1112N/177E, Ditch B2, Level 1, depth 0–3"). Diam. 25mm.

*Fe 3449 (621N/543.6E, surface find). Diam. 28mm.

Fe 3452 (575N/264E, RBI Northern Ext Ditch, Level 0). Diam. 35mm.

Fe 3453 (637N/573E, Kiln 14, Level 1, depth 0–3"). Diam. 35mm.

Fe 3455 (750N/355E, Ditch F3, Level 3, depth 12–18"). Diam. 50mm.

Fe 3440 (1386N/609E, Central Enclosure north ext, Level 4, depth 9–

12"). Possible coil from a goad. Diam. 21mm.

Broken Rings

Fe 3420 (405N/137E, pit, Level 1, depth 0–3"). Diam. 32mm.

Fe 3423 (1221N/193E, pit, Level 1, depth 0–3"). Diam. 22mm.

Fe 3431 (1177N/206E, clearing close to pit). Diam. 21mm.

Fe 3433 (1132N/169E, Ditch B5, Level 2, depth 6–12"). Diam. 62mm.

Fe 3434 (950N/437E, Ditch A1A, Central Enclosure inner ditch, Level 4, depth 18–24"). L. 24mm.

Fe 3443 (938N/261.6E, posthole). Fragments only.

*Fe 3444 (433N/160E, RBI, Level 1, depth 0–6"). Diam. 40mm.

Fe 3446 (1296N/210E, Ditch B6, Level 1, depth 0–6"). Diam. 25mm.

Fe 3454 (1027N/289E, pit). L. 32mm.

Fe 3460 (323N/473E, pit, Level 2, depth 3–6"). Diam. 40mm.

Structural Fittings

The 'U'-shaped arms of a drop hinge (No. 3707) and an 'L'-shaped hinge staple (No. 3359) used to hang doors were recovered, the latter from a third- to fourth-century deposit. Four well-preserved split-spiked loops (Nos. 2539, 3335, 3338 & 3344) were found with long, straight arms suggesting they had been driven into timbers to provide points of attachment rather than having been used in pairs as simple hinges for box lids. Looped terminals broken from looped-headed spikes, also known as ring-headed pins, served the same function (Nos. 3001, 3004, 3288 & 3364). Similarly, the three 'U'-shaped staples would have been used as points of attachment. A small number of broken fittings (not individually catalogued here) come from either split-spiked loops, 'U'-shaped staples or chain links but cannot now be distinguished one from the other (Nos. 2688, 3053, 3164, 3230, 3345, 3428, 3450 & 3464). A small number of cramps and joiner's dogs for joining timbers were found. The seven cramps occurred in first- and second-century contexts including two (Nos. 2036 & 2037) from fills in Well 4. A small number (three) of 'T'-shaped staples (Nos. 1218, 1439 & 3354) were found on the settlement. One (No. 3354) from RBII has the two arms of the head curled under as seen on examples elsewhere such as the villa in Gadebridge Park (Neal 1974, no. 515, fig. 74).

Nails dominated the iron assemblage from the Roman settlement. As is usually the case, the vast majority of the nails fall into Manning's type 1b (Manning 1985, 134) with angular-sectioned shanks and flat heads. Larger nails with domed heads of type 1a (e.g. No. 2757), and type 2 with triangular heads the same thickness as the shank were also

present in similar proportions to other Romano-British settlements. These large nails were used on large structural timbers. Occasional nails of other types such as a domeheaded nail or stud (No. 2795) for use on upholstery were also noted.

Fe 3707 (unlocated clearing). Iron drop hinge with two strap arms connected by a 'U'-shaped neck of square section. L. 85mm, strap W. 25mm.

Fe 3359 (167N/558E, Kiln Ditch, Level 3, depth 6–9"). Iron 'L'-shaped hinge staple with a square-sectioned shank and a round-sectioned arm. L. 50mm.

Fe 2539 (1050N/622E, Well 4, Level 2, depth 3–6"). Iron split-spiked loop with remains of a broken ring. L. 58mm, head Diam. 28mm.

*Fe 3335 (344N/327E, RBI, 6" above charcoal, Level 1). Iron split-spiked loop with long, rectangular-sectioned arms. L. 85mm, head Diam. 22mm.

*Fe 3338 (383N/518E, pit, Level 4, depth 9–12"). Iron splitspiked loop. L. 75mm, head D. 38mm.

*Fe 3344 (410N/100E, pit in RBIII, Level 4, depth 18–24"). Iron split-spiked loop. L. 83mm, head D. 28mm.

'U'-shaped Staples

Fe 938 (1879.5N/783E, North Enclosure ditch clearing). L. 65mm.

Fe 1793 (995N/612E, Ditch A3A, clearing). L. 46mm.

Fe 2988 (1845N/1045E, North Enclosure, late fill, Level 3, depth 9–12").

Looped Terminals

Fe 3001 (960N/280E, subsoil). Head Diam. 26mm.

Fe 3004 (867N/150E, Ditch B3, Level 2, depth 3–6"). L. 60mm.

Fe 3288 (1884N/797E, North Enclosure, late fill, Level 3). L. 42mm.

Fe 3364 (494N/537E, pit, Level 1, depth 0–3"). L. 52mm.

Joiner's Dogs (rectangular-sectioned strap with upstanding arm at each end)

Fe 3032 (1828N/878E, North Sub-Enclosure Ditch, west side of causeway, Level 6, depth 15–18"). Complete. L. 64mm.

Fe 3141 (20N/325E, RBII, Level 1). L. 88mm.

Fe 3255 (675N/193E, pit, Level 1). Complete. L. 60mm.

Cramps (flat-sectioned strap with upstanding arm at each end)

Fe 2036 (1050N/622E, Well 4, dark fill, Level 10, depth 27–30"). L. 88mm.

Fe 2037 (1058N/625E, Well 4, Level 2, depth 6–9"). L. 46mm.

*Fe 3059 (438N/243E, RBI, secondary silt, Level 2). L. 73mm.

*Fe 3350 (295N/310E, RBI, Level 1). L. 52mm.

Fe 3157 (284.2N/442.8E, pit, Level 1, depth 0–3"). L. 50mm.

Fe 3201 (893N/263E, pit, Level 2, depth 3–6"). L. 65mm.

Fe 3486 (401N/403E, surface find). L. 45mm.

'T'-staples

Fe 1218 (853N/728E, Central Enclosure inner ditch, clearing).

Fe 1439 (1180N/775E, clearing inside RB Structure 6).

Fe 3354 (115N/335E, RBII, Level 1, depth 0–6"). L. 84mm.

Nails

*Fe 2757 (1074N/345E, Ditch B27 butt end, Level 2, depth 3–6"). Iron large nail with long square-sectioned shank and domed asymmetrically placed head. L. 200mm, head Diam. 35mm.

*Fe 3208 (860N/610E, Central Enclosure outer ditch, Level 4). Iron large nail with clenched shank and domed head. L. 130/35mm, head Diam. 35mm.

Fe 2795 (1768N/1050E, North Enclosure ditch, Level 3). Iron dome-headed stud with short shank. L. 26mm, head Diam. 20mm.

Miscellaneous Fittings

Four small, coiled ferrules, three of round-sectioned wire, the other (No. 2916) of flat-sectioned strip, were found in first- and second-century AD deposits. Each consisting of two coils, they ranged in diameter between 18–28mm. Whilst they may be broken ox goads, the consistency of the double coil and the lack of any surviving tines suggests that they are simple coiled ferrules, commonly found on both Iron Age and Romano-British sites. Like collar ferrules they were used to help prevent tanged implements from splitting their wooden handles.

A collar ferrule of uncommon form, with the ends joining in a scrolled ring junction (No. 3448) was found in the Inner ditch of the Central Enclosure in a deposit likely to date to the early–mid second century AD. It would seem that the collar had been fixed in place by the blacksmith when still hot and malleable allowing the strap to be rolled over to tighten about the wooden haft. A narrow collar ferrule (No. 2439) was found in a later second-century fill of Well 4. At least two other broken examples were also noted from the site, one (No. 3172) possibly a grave-good deriving from Anglo Saxon Grave 802.

Two, slender ring-headed pins (Nos. 2678 & 3028) are of uncertain use, the first from a second-century context, the second from a Roman or Anglo-Saxon deposit. Each has a slender, round-sectioned stem, and a gently curving profile. Ring-headed pins with sturdy stems driven into wooden beams and planks were used as points of attachment, more slender examples being used with staples as simple fastenings. These examples, however, would appear more suited to acting as stick pins or large buckle pins than structural fittings. A fragment of coiled stem (No. 3481) from a first-century AD ditch in RBIII, is also of unknown function, unless it comes from a large pre-Roman bow brooch.

Fe 2916 (190N/95E, pit in RBI, Level 3). Iron coiled ferrule. Diam. 18mm.

Fe 3426 (1350N/585E, Central Enclosure outer ditch, Level 5, depth 12–15"). Iron coiled ferrule. Diam. 22mm.

Fe 3473 (1180N/133E, Ditch B1, Level 3, depth 6–12"). Iron coiled ferrule. Diam. 20mm.

Fe 3482 (240N/320E, spoil heap next to RBI outer ditch). Iron coiled ferrule. Diam. 28mm.

*Fe 3448 (836N/711E, Central Enclosure inner ditch, Level 1, depth 0–3"). Iron collar of rectangular-sectioned strap, the ends rolled over to form a scrolled ring. Diam. 43mm, W. 15mm.

Fe 2439 (1063N/637E, Well 4, outer light fill, Level 14–15, depth 39–45"). Iron collar ferrule. Diam. 14mm.

Fe 3172 (716N/545E, pit, Level 1, depth 0–7"). Iron collar ferrule broken. Diam. 43mm W. 22mm.

Fe 1782 (unlocated). Iron collar ferrule broken. Diam. 35mm, W. 28mm.

*Fe 2678 (200S/425E, Well 7A, fill A). Iron ring-headed pin of round section with a curled loop terminal. L. 90mm.

Fe 3028 (1869N/872E, North Sub-Enclosure ditch, late fill, Level 6, depth 11–15"). Iron ring-headed pin. L. 62mm.

Fe 3481 (413N/78E, RBIII, Level 1, depth 0–3"). Four iron fragments of coiled stem. Diam. c. 25mm.

Broken Conical Ferrules or Open Sockets

Fe 3173 (1160N/236E, hollow, Level 2, depth 3–5"). Diam. 20mm.

Nailed Bindings (minimum)

Fe 1779 (1239N/818E, Central Enclosure inner ditch, Level 1, depth 0–3").

Fe 2021 (Enigma baulk).

Fe 2030 (897N/807E, pit, Level 1, depth 0–12”).
 Fe 2045 (1060N/637E, Well 4, Level 5, depth 12–15”).
 Fe 2050 (1050N/622E, Well 4, Level 2, depth 3–6”).
 Fe 2224 (355N/260E, surface clearing).
 Fe 2247 (1220N/169E, Ditch B15, Level 1, depth 0–6”).
 Fe 2293 (1311N/560E, Central Enclosure outer ditch, Level 2, depth 6–12”).
 Fe 2307 (1160N/236E, hollow, Level 2, depth 3–6”).
 Fe 2309 (387N/344E, RBI, Level 2).
 *Fe 2310 (285N/310E, RBI, loam, Level 2).
 Fe 2415 (380N/150E, RBI, loam, Level 2).
 Fe 2432 (375N/415E, RBI, loam, Level 2).
 Fe 2577 (1041N/639E, Well 4, dark fill, Level 12, depth 33–36”).
 *Fe 2720 (15N/510E, Kiln Ditch, fill A, Level 3).
 Fe 2732 (350N/120E, RBI entrance ditch, Level 2, 6”– bottom).
 Fe 2900 (195N/115E, RBI, Level 1).
 Fe 2919 (160N/208E, RBI, late fill).
 Fe 2924 (189.1N/108.4E, RBI, Level 1).
 Fe 3000 (308.1N/555.7E, Ditch north of RBIII, Level 2, depth 3–6”).
 Fe 3177 (330N/120E, RBI, Level 2). Curved binding.
 Fe 3490 (426N/82.6E, PG25, surface).
 Fe 3496 (473N/65E, PG25, surface). Nailed sheet/strap.
 Fe 3645 (272N/410, RBII Annexe, Level 2, depth 3–6”).
 *Fe 3646 (260N/240E, RBII, depth 0–btm).
 Fe 3650 (1400N/300E, clearing interior of PG79).
 Fe 3729 (920N/750E, Ditch A1A, Level 2, depth 3–6”).

Rivetted Sheet

Fe 1798 (1290N/552E, Central Enclosure outer ditch, Level 3, depth 6–9”).
 Fe 2244 (945N/430E, Ditch A2N, Level 3, depth 12–15”).

Other Finds

While Mucking produced an impressive assemblage of Romano-British glass, of the finds considered in this section perhaps most significant are its querns. This is due to the fact that their recovery helps to address the

question of the scale of the site's arable economy and thereby helps to off-set the paucity of its environmental data.

***Quern Stones* David Buckley and Hilary Major**

Mucking produced pieces from a substantial number of quern stones that derived from a wide range of contexts (see [Fig. 1.12](#) for distribution). It is the largest assemblage of quern stones from an Essex site, possibly also from any in the whole of East Anglia and, therefore, has a significant contribution to make to quern studies.

The stones were examined by the authors in 1984. At the time only limited research into quern stones had been undertaken since the pioneering work of Curwen (1937; 1941) and the Mucking querns were considered to have the potential to advance quern stone studies significantly. The final report was not written until 2009 but no further examination of the stones was carried out. In the intervening years the situation had changed considerably. Many more Essex sites had produced querns for study, notably the large groups from Stansted Airport (Major 2004a; Cooke *et al.* 2008) and Elms Farm (Major 2015). Across the country understanding had been advanced by a number of regional surveys, notably that for querns in the northeast of England which includes a review of most research issues regarding quern stone (Heslop 2008). The published volume for the Anglo-Saxon settlements at Mucking did not include a report on the quern stones from Anglo-Saxon features and these finds are also covered by this report. The Mucking

querns remain important but they can now be considered both locally and nationally in the light of more recent developments in thinking about the evolution, production, exchange and deposition of quern stones.

Pieces from 331 definite or possible saddle and rotary quern stones were identified. Many of those were very small; only the larger pieces and those retaining features of interest were selected for illustration and these are described in detail below. For the most part the discussion draws upon the archive, which contains information on all of the recognisable quern stone pieces. The archive also contains details about a large quantity of other stone from the site some of which may derive originally from fragmented and/or re-used quern stones. Small pieces of quern can be difficult to identify and may not have been recognised by the excavators.

Illustrated Rotary Querns (Figs. 3.8–9)

(for Querns 1–4 see the Prehistory Volume; CN is computer catalogue number)

5. (3206, CN1670, 225N/230E, ditch RB9, Level 1, first century AD). Puddingstone Upper stone. Burnt. Diam. c. 260mm.
6. (3210, CN1741, 510N/110E, Level 2, undated pit). Puddingstone Upper stone, c. 50%. A slightly asymmetrical stone. One handle hole is present, worn through to the grinding surface.
7. (3208, CN1818, 1048N/632E, Level 39, Well 4, second century AD). Puddingstone Upper stone, ferruginous sandstone matrix. Diam. c. 320mm.
8. (3212, CN1825, 1074N/350E, unknown context, first century AD). Puddingstone Upper stone. The outer edge has been chipped off.
9. (3209, CN1838, 1245N/316E, unknown context, first century AD). Puddingstone Upper stone, ferruginous sandstone matrix. Diam. 340mm.
10. (3177, CN1649, 190N/360E, Level 2, ditch RBII, second century AD). Lava Upper stone, two joining fragments. Smooth grinding surface, top and edge grooved. Low kerb present. Diam. 420mm.
11. (3173, CN1798, 939N/694E, pit?, date unknown). Lava Upper stone. Surface dressed but rather eroded. Shallow kerb present. This has a join with a fragment from Well 6 (first century AD).
12. (3183, CN1805, 950N/740E, Level 23, Well 6, first century

AD). Lava Upper stone. The grinding surface has traces of concentric grooves, possibly due to wear rather than a deliberate pattern. The top is harp-dressed and the edge has vertical grooves. Another non-joining piece of the same quern came from the same context.

13. (3172, CN1808, 950N/740E, Level 23, Well 6, first century AD). Lava Upper stone. The top is harp-dressed. The grinding surface has worn grooves, possibly radial, and there are vertical grooves on the edge.

14. (3185, CN1655, 200N/515E, unknown context, second century AD). Lava Lower stone. Harp-dressed grinding surface, bottom and edge roughly tooled.

15. (3180, CN1815, 990N/156E, ditch, first century AD). Lava Lower stone. Grooved grinding surface. It has been trimmed into a circular disc with a central depression.

16. (3181, CN1836, 1234N/446E, pit?, undated). Lava Lower stone, c. 60%. Pecked grinding surface, other faces rough.

17. (3312, CN1843, 1318N/622E, Level 1, Central Enclosure, Phase 1, first century AD). Lava Lower stone. Grinding surface and edge grooved. There is a slight ridge round the central hole. Differential wear on the grinding surface suggests possible re-use. Diam. 610mm (possible millstone).

18. (3228, No CN, Re-used in fabric of Kiln II, Roman). Millstone Grit Upper stone. The top is coarsely pecked and the edge smooth. The grinding surface has very worn concentric grooves. There is a possible handle hole perforating the stone 120mm in from the edge. Diam. 350mm, Th. 40mm.

19. (3204, CN1812, 970N/865E, pit?, first century AD). Greensand Lower stone. Nearly complete and extremely crudely finished. It has apparently been made from an irregular natural boulder. The central hole is large, and completely perforates the stone. Diam. 420mm. [Apparently occurring as a machine-damaged surface-find, this had obviously been extensively reworked into something approaching a cup-like shape. While this may have been for some manner of structural usage, another very real possibility is that it then served as a stone anchor; see [Fig. 1.18](#)).

Stone Sources

The stone identifications were made by geologists at the Passmore Edwards Museum, initially Graham Ward then Fiona Talbot, working with Margaret Jones. Many of the pieces were distinctive stone types readily identifiable by eye, i.e. Greensand, Sarsen, Lava and Millstone Grit, for which possible sources can be suggested. However, quite a lot

of the Mucking quern stones were other stone types of less certain source. A recommendation that a selection of stones be thin-sectioned to try to refine the identification of possible places of origin for the stone could not be actioned and some sources discussed are therefore tentative.

Lava from rotary querns is the largest group at Mucking. Quern stones and millstones were produced in very large numbers at the Mayen quarries in the Rhineland from the Iron Age up to the present day (Crawford & Roder 1955). During the Roman period stones from this source were widely exported across northern Europe, including the British Isles. Volvic lava from the Auvergne region of France was also used but the evidence for trade from this source to England is limited (Peacock 1980). Fragments of lava quern are particularly common on Roman sites in the southeast of England and in Essex alone over 800 have come from excavated sites (authors' records). It is probable that the importation of lava declined in the third and fourth centuries (Peacock 1980, 50), and that the trade to Britain had ceased by the end of the Roman period and did not become reestablished until the middle Saxon period (Parkhouse 1977). It then continued throughout the medieval period and later up to the twentieth century (Amer 1987).

Sarsen was the main stone type used for the saddle querns found at Mucking (see the quern report in the Prehistory Vol.). This stone is found widely in Southern England across areas of chalk downland. It outcrops locally in Thurrock, South Essex, and in the northeast of the county. Large sarsen stones are also found as erratics within the boulder clay, which covers much of north and central Essex, and within the Essex river gravels. Sarsen was much used for saddle querns during the Iron Age and also for rotary querns, but these are quite rare in the east of England (see King 1986).

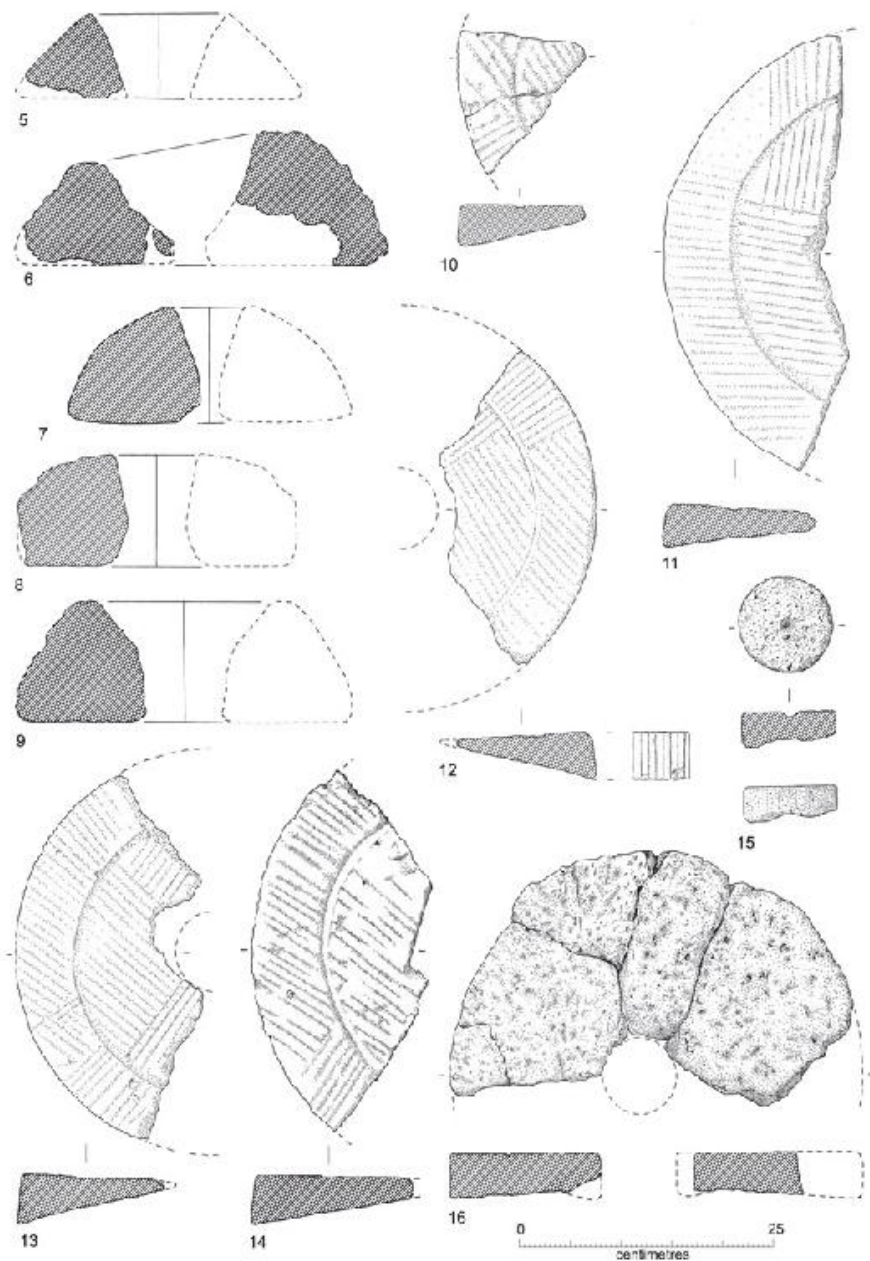


Figure 3.8. Querns (I).

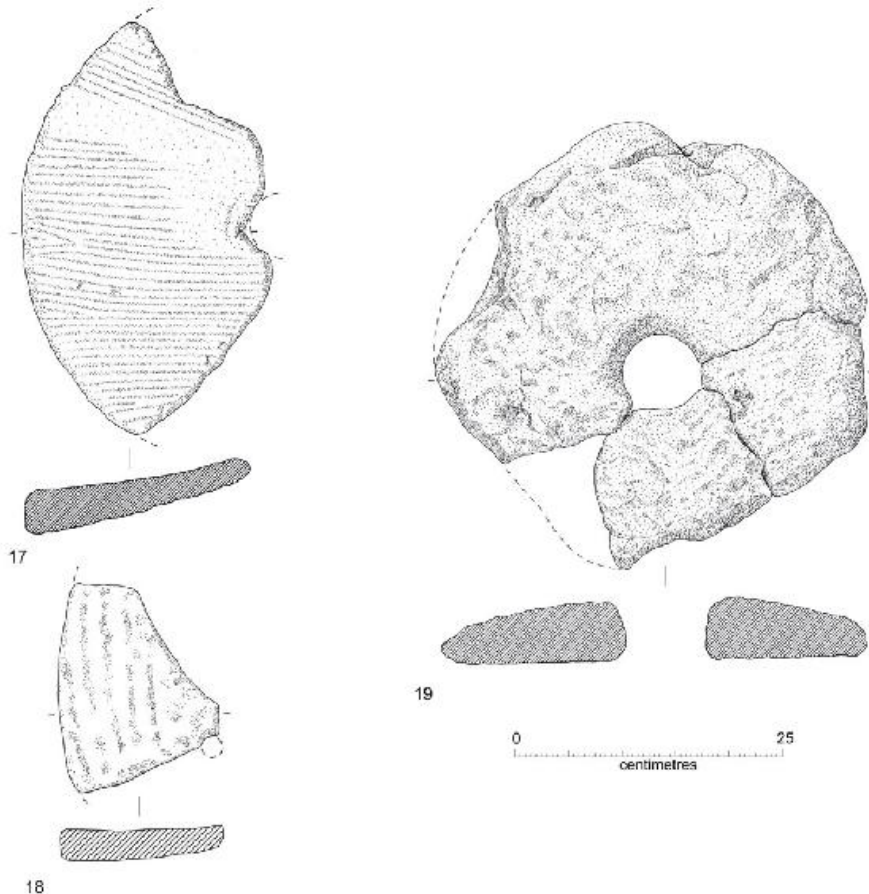


Figure 3.9. Querns (II).

Puddingstone, which was used mainly for rotary querns, is a conglomerate of flint pebbles in a siliceous mix that is found near to the base of the Tertiary Woolwich and Reading Beds. It is often referred to as Hertfordshire puddingstone since this is the core source area, but it is also found across neighbouring counties, either *in situ* or as erratic boulders. Despite the hard, dense pebbly nature of the stone that makes it difficult to work, it provided a major source for querns in East Anglia and southern Central England. Like the Sarsen used for saddle querns, some of the puddingstone quern stone from Mucking could have been found locally but it is more likely that most stones came from quarry sites like that recently discovered at Colliers End, Hertfordshire (Lovell & Tubb 2006). The stones were transported some distance to the site probably as substantially prepared rough outs or fully prepared stones. It is notable that, while most puddingstone querns found in Essex and other southeastern counties have a hard, pale-coloured siliceous matrix, the Mucking group

includes examples with a ferruginous sandstone matrix. Similar querns have been found in Kent, and it is possible that the source of this type of puddingstone is there, and not Hertfordshire. Puddingstone was also quarried for querns in the Seine-Maritime region of France (Remy-Watté 1980– 1). A number from this source have now been identified along the south coast of England and it is considered that ongoing research will lead to the recognition of others (Chris Green pers. comm.).⁶

Greensand outcrops across the southern, central and northeastern areas of England. Where suitable it was quarried for saddle querns, beehive and flat forms of rotary quern. Known quarries include Lodsworth, West Sussex (Peacock 1987) and Folkestone, Kent (Keller 1988). The Spilsby Sandstone of the Lincolnshire Wolds was also utilised, although no particular quarry sites have been identified. Stones from this area were traded to the Anglian region and significant numbers of querns from this source have been found in Cambridgeshire, Norfolk, Suffolk, Bedfordshire and Hertfordshire (Ingle 1989). It is possible that thin sectioning might establish that some Essex stones came from this source, but at the present time these are considered to have their origin in sources south of the River Thames.

The main outcrops for Millstone Grit are in the Pennines with a secondary source in South Wales. The establishment of a precise provenance for the stone remains difficult on the basis of petrology. In the north of England it was used widely for beehive querns during the Iron Age (Heslop 2008). Production of flat forms appears to have begun soon after the conquest of the north in the late first century AD, almost certainly influenced by the appearance of the flat lava quern used by the Roman Army (Buckley & Major 1990, 117–20). These querns came to be traded widely to sites in the south of England.

The other stone used for querns found at Mucking included a variety of sandstones and grit stones, most of which are difficult to provenance. Hard brown sandstone is found within the Bagshot Beds and this was the suggested source for saddle querns from the Mucking North Ring, possibly from locations nearby at Langdon Hills or from the Rayleigh-Hadleigh area (Bond 1988, 22). Other beds within the Millstone Grit series were used for querns in the north of England (Heslop 2008) and these could have provided a source. Alternatively they could have been traded from locations in the Midlands or the Welsh Borders. Devonian sandstone outcrops in the Mendips, Bristol area and the South Wales/Welsh Borderland and Shropshire and the Bristol/South Wales areas are known to have been a source for querns in the Roman period (Barford 1984). There is some evidence for a

trade to central and southeastern England from that region (King 1982, 29). One of the other stones from Mucking was described as a coarse quartz grit/fine quartz conglomerate, perhaps Lower Silurian, and probably from Wales.

The other stone includes two pieces of shelly limestone from an unidentified source. Limestone rotary querns are relatively rare but Purbeck Limestone was used in the Iron Age e.g. Balksbury Camp, Hampshire (Buckley 1995, 47, fig. 46). Limestone composed entirely of the shells of Foraminifera that came from the Mixon Reef at Selsey, Sussex, is a rare instance of stone used for Early Anglo-Saxon rotary querns (White 1934, 396–8). The source is now located well offshore but was part of the accessible coastline in the fifth century AD.

A single piece of stone identified as a possible piece of granite could have derived from a locally found erratic. The nearest quarried sources are in the West Country and pieces have been found on Iron Age sites as far east as Hampshire (Buckley 1995, 41).

Quern Contexts

Since 1984 issues relating to the stratigraphy and phasing at Mucking have been resolved and dated contexts not available then have been provided (Archive and [Table 3.2](#)). However, when applied to the quern stones they are provisory, since individual stones had the potential to be used for a long time, to be re-used in a variety of ways, to break into many pieces and become widely dispersed. This means that few, if any, of the Mucking quern stones relate directly to the contexts in which they were found. Some querns are without dated contexts, and in a number of cases the context dates attributed are problematic and these almost certainly represent quern pieces which have found their way into the later upper fills of earlier features (i.e. Levels 0, 1 & 2).

A substantial number of the rotary quern fragments derived from features of first- to second-century date and are considered to be of early Roman origin, as also are most of those from later and unknown contexts ([Table 3.2](#)).⁷ There were 21 from the backfill of wells ([Table 3.3](#)) and significant concentrations were located within sections of the Southern and Central Enclosure ditches. Since none of the quern fragments from Mucking are interpreted as being *in situ* these may reflect specific episodes of site clearance and could provide an indication of locations where grain processing may have taken place over a prolonged period. It can also be noted that while most of the pieces were too small to provide much detail about the operation of the stones there were seven with diameters greater than 600mm and two that were over 100mm thick, which may possibly have come from larger mechanically powered mills.⁸

Puddingstone Querns – A total of 19 definite and four possible puddingstone rotary quern fragments from Mucking were found in a range of contexts (Table 3.2). They form the second largest group from an excavated site in Essex after Elms Farm (Major 2015) and can be added to the many hundreds recorded from the Anglian region and more widely, including more than 220 from Essex. All are of the bun-shape, which is typical for these stones. The illustrated examples demonstrate some of the variations in form that occur, notably in the size and shape of the hopper (Quern Nos. 5–9). The profiles show that the grinding surfaces are well worn and in the case of No. 6, wear had reached a handle slot originally cut into the side of the stone.

The context dates for the Mucking puddingstone querns can be considered with reference to the finds from elsewhere in the region. Although these have been numerous, many are stones without any archaeologically recorded context, while those from excavations have rarely had securely dated contexts. This means that while there are identifiable variations in the form of Puddingstone querns which may be chronological, it has not yet been possible to produce a typological sequence against which new finds can be compared.

Curwen made a distinction 70 years ago between Iron Age beehive rotary querns and Roman flat rotary querns, but noted that for the distinctive bun-shaped puddingstone rotary querns, datable associations, where they existed, were always Roman (Curwen 1941, 20). For many years this situation remained largely unchanged until the excavation of the Iron Age and Roman site at Elms Farm Heybridge (excavated 1993–5) produced a large enough assemblage to enable analysis of deposition of puddingstone through time using the data from a single site. They included a fragment that formed part of a special deposit within a pit for which it was possible to establish the date of deposition as c. AD 10–25. Some support for a Late Iron Age date came from Stansted where a puddingstone rotary quern was noted as an unusual find in a pre-Roman ditch context (Cooke *et al.* 2008, 107). However, the ditch was not exclusively Late Iron Age but more broadly Late Iron Age/Early Roman and, like many of the other puddingstone querns from possible Late Iron Age contexts, could have been deposited at any time during the first century AD. There were also two unworked fragments of puddingstone from Late Iron Age contexts that were assumed to represent either quern production or the remains of a broken quern, as the stone is not local. This may be the case, but they could be bits of erratics and therefore ‘local’ to the site.

Table 3.2. Context dating for all rotary quern stone types.

Stone Type	MBA	LBA	EIA	MIA	E/MIA	RB Phase 1	RB Phase 2	RB Phase 3	Roman	Roman/ Anglo-Saxon	Anglo-Saxon	Medieval	Modern	Not known
Puddingstone Definite	1	-	-	-	-	9	3	-	-	-	3	-	-	3
Puddingstone Possible	-	-	-	-	-	1	1	-	-	-	2	-	-	-
Lava	-	1	-	-	1	38	24	1	1	2	13	9	4	12
Millstone Grit Definite	-	-	-	1	-	12	18	2	1	2	9	-	-	7
Millstone Grit Possible	-	-	-	1	-	3	1	-	-	-	3	-	-	-
Conglomerate	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Felspathic sandstone	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Granite?	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Greensand	-	3	-	1	-	-	-	-	1	-	2	-	-	-
Grit	-	-	-	-	-	-	-	-	20	-	8	-	-	2
Quartzite	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Sandstone	-	-	1	2	-	-	-	-	10	-	13	-	-	4
Sarsen	-	-	1	-	-	-	-	-	2	-	2	-	-	-
Sarsen?	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Shelly limestone	-	-	-	-	-	-	-	-	-	-	2	-	-	-
Unidentified	-	-	-	-	-	-	-	-	1	-	2	-	-	1
	1	4	2	5	1	63	47	3	37	5	61	9	4	31

Table 3.3. Number and stone types from wells.

Well No.	Puddingstone	Lava	Millstone Grit	Sandstone	Grit	TOTAL
1	1	2	3	2		8
4	1		1			2
6		3	1		1	5
7/pit B			1			1
7A		1			1	2
Unspecified		1	1		1	3

Table 3.4. Other stone: types of stone present.

Stone Type	Definite rotary quern	Possible quern
Conglomerate	1	1
Felspathic sandstone	0	1
Granite?	1	1
Greensand	6	1
Grit	21	9
Quartzite	1	0
Sandstone	17	13
Sarsen	4	1
Sarsen?	1	0
Shelly limestone	0	2
Unidentified	1	2
TOTAL	53	31

In addition to providing a firm Iron Age date for one stone, the evidence from Elms Farm pointed to the production of puddingstone rotary querns having ceased by c. AD 160, if not earlier, and that querns deposited later than this are residual (Major 2004b; Major 2015). The finds at Mucking support this, since most came from first-/second-century Roman contexts, with a small number residual in Anglo-Saxon features. On this basis a puddingstone rotary quern from the Inner Ring of the South Rings enclosure is clearly of much later date.

Lava Querns – A total of 106 lava rotary quern fragments were recovered from different period contexts (Table 3.2). Most are very small and in poor condition, although some retain distinctive features found on Roman lava querns such as a low raised kerb and panels of grooves on the top surface, handle slots or traces of the central hopper (Nos. 10–17). One of the more substantial pieces, No. 17 from the Central Enclosure, was of notably greater diameter at 610mm. No. 16 had a pecked rather than grooved grinding surface.

This is the second largest group of lava quern from the county after Elms Farm (Major 2015), but collectively they add little new to current understandings of this type of quern stone. The majority (62) were from contexts of first-/second-century date. This equates with the pattern for the region which points to lava querns starting to be imported immediately following the Roman Conquest via the port at London, and possibly Colchester, but that this trade had declined by the end of the second century (Buckley & Major 1983, 73–6). While the very small number from later Roman contexts at Mucking simply reflects the primary occupation of the settlement, this trade appears to have definitely ended by the Early Anglo-Saxon period and the lava pieces from later contexts, including those from *Grubenhäuser* at Mucking, are likely to be of Roman origin.

Number 15 is a fragment of re-worked lava quern from a first-century AD ditch. It has been trimmed into a c. 100mm diameter by c. 30mm-thick circular disc with a shallow depression on one side. Discs of various sizes made from re-used pieces of stone, tile or pottery are often found on Roman sites. The smaller examples are probably playing pieces, and are most commonly found at military sites, which are also the most common findspots for purpose-made glass counters. The purpose of the larger discs is in most cases uncertain, but two main uses can be suggested. Firstly, they could have been used as lids for pottery vessels. Secondly, they may have been used as counters or playing pieces. Similar playing pieces have been found on both Roman and later Medieval sites (e.g. Rivenhall, Essex; Rodwell 1993, 60), and even on more far-flung sites such as prehistoric Harappa (www.harappa.com). In Essex, with its dearth of hard stone, the larger discs are usually made from pieces of tile chipped to size, often rather crudely finished. There is a rare example of a stone disc, made of shale, from Colchester (Crummy 1982, 250). Tile discs have come from a number of sites including Colchester (*ibid.*, 220) and Chelmsford (Wickenden 1992, 88).

Millstone Grit Querns – There were at least 52 definite and eight possible pieces of millstone grit quern. These came from a range of

contexts although notably over half were from those of the first/second centuries (Table 3.2). The stones were generally flat with pecked grinding surfaces; thin from wear, but otherwise the majority were too fragmentary to enable much comment about variations in original form. A fragment from Kiln 2 had a possible handle hole perforating the stone and another retained parts of the central hopper hole. There were five pieces that originally had diameters of between 600 and 700mm, comprising larger stones that may have been mechanically operated. Coincidentally these also had concentric grooves on the grinding surface, a form of dressing which is not particularly common at the site, although not exclusive to possible millstones since it is also present on at least one hand quern. A further two pieces without a measurable diameter but more than 100mm thick may also be from millstones.

A few early Roman examples of Millstone Grit rotary quern and possible millstone are known from Essex, but at Ivy Chimneys, Witham, the majority of a sizable group of pieces came from later Roman contexts (Buckley & Major 1999, 115–16). At the Orsett ‘Cock’ enclosure, a few kilometres northwest of Mucking, seven pieces of Millstone Grit were most likely of second- or third-century date (Major 1998b, 87–8). During the third and fourth centuries Millstone Grit querns and millstones were a major import into London (Milne 1985, 122), although an unfinished Millstone Grit millstone found in the Blackfriars boat shows that the trade was active in the second century (Marsden 1966). The dates for many of the stones from Mucking are an indication that the site was benefiting from this trade from as early as the first century AD.

Other Stone – There were 84 definite or possible rotary quern fragments in a range of other stone types (Tables 3.2 & 3.4). Roman rotary querns in stones other than puddingstone, lava, or Millstone Grit are rare in Essex, and this is an unusually large group.

The Greensand rotary querns may be Iron Age in date as suggested in the prehistoric quern report, but No. 19 came from an early Roman context. Sarsen rotary querns came from two Roman contexts. These, with the example from an Early Iron Age context and another two from Anglo-Saxon contexts are, to the authors’ knowledge, the only Sarsen rotary querns from Essex. The most common type of stone is grit stone/medium-coarse sandstone but with finer sandstone also present in some quantity. Roman limestone rotary querns are fairly rare but not unknown from Essex (e.g. a fossiliferous quern from Great Chesterford collected in 1906 by Mr. T. King, which is in the Saffron Waldon Museum).

Roman Quern Trade

The Mucking assemblage is of value for the information that it provides about the range of sources and scale of quern trade contacts established by the Roman settlement. Recent research has helped to expand understanding of the principal stone types that were preferred for rotary querns during the Iron Age and Roman periods. It has identified core source areas for the different types of stone, along with specific quarry sites for some, and established broad regional zones within which they were distributed. It has also demonstrated that while some stone types, such as lava and Millstone Grit, were traded over wide areas, many others are only rarely found outside of their identified regions. This applies to the readily identifiable puddingstone, Greensand, Sarsen, and also to a range of sandstones, grit stones, limestone and granite.

When Mucking is compared to other Roman settlements in the area, differences can be noted in the number and range of rotary quern stone types that were being received. All participated in the trade in lava querns, but at Colchester this was particularly dominant and is most probably a reflection of its military status (Buckley & Major 1983, 73–6). In London lava querns appear to have been superseded by mainly Millstone Grit rotary querns in the third–fourth centuries. Inland in Essex excavated sites appear to have participated in the trade in both lava and Millstone Grit querns, but only small numbers of puddingstone and other stone types tend to be present e.g. Stansted (Major 2004a), Witham (Buckley & Major 1999, 115–16), Chignall St James (Major & Buckley 1998) and Boreham (Major & Lott 2003, 85–7). Only at the small Roman town at Elms Farm is there a comparable range of stone types to Mucking, although here the other stone types are less numerous (Major 2015). This difference may simply be a reflection of the much higher level of sampling achieved for features at Mucking. Alternatively it may relate to an essentially rural status for the Mucking settlement, which had a strong dependence on both the growing and processing of arable crops.

The finding of a Millstone Grit millstone in the Blackfriars boat demonstrates how important water transport may have been in facilitating the movement of heavy stone from other regions of the country via the River Thames to London (Marsden 1966). It would appear that Mucking was able to take advantage of its proximity to the river to join in this trade to obtain stone and other items from a wide range of sources. The many quern stones, including seven possible millstones that would have enabled more substantive quantities of grain to be processed, may be a reflection of how the site was able to reciprocate by exporting its produce to London and further afield.

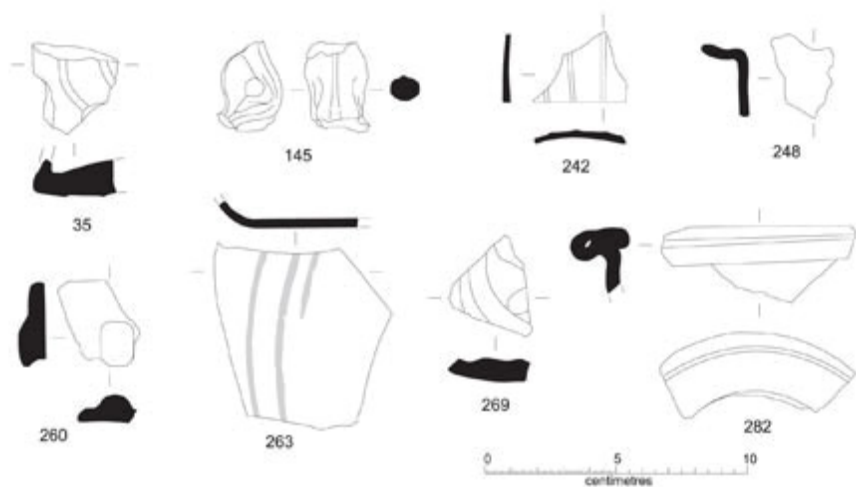


Figure 3.10. Glass from settlement features.

***Jet Artefacts* Chris Going and Sam Lucy**

The majority of jet and shale artefacts from the settlement features were assigned either to prehistoric or Anglo-Saxon features. The only exceptions were four jet beads, located relatively close together along the southern ditch-line of the main settlement enclosure. This may represent the stray loss of a jet bead necklace or bracelet. Cool (2011, 301) has drawn together the evidence for jet bead bracelets in Roman Britain and notes that their use as gravegoods in a handful of male burials could have been an appropriate way of marking a distinctive social identity, perhaps even part of priestly regalia.

1. 847N/635E, Central Enclosure outer, Level 5 (NB 232.42, 55B.150–1). Jet bead (fragmentary) L. 13mm.
2. 835N/659E, Central Enclosure outer, Level 1 (NB 232.65, 55B.150–1). Similar jet bead L. 15mm.
3. 858N/608E, Central Enclosure outer, Level 6 (NB 321.71, 55B.150–1). Small annular jet bead.
4. 858N/608E, Central Enclosure outer (NB 231.71, 55B.179–80). Small disc-shaped jet bead, with slight signs of a groove around the circumference, single central perforation.

***Glass* Dorothy Charlesworth and Donald Harden**

The excavations produced 472 glass fragments ([Fig. 3.10](#); see [Fig. 5.11](#) for distribution). Examination of the material was begun by the late D. Charlesworth, and following her death, D.B. Harden kindly agreed to examine the remaining material. Jennifer Price reviewed the identifications as part of the most recent project. In addition to the material reported on here, there are three glass vessels from the cemeteries. These are reported on separately, in the relevant section of the report, but they are discussed in the

summary of the material from the site, below.

The assemblage of glass from Mucking is typical of that recovered from excavations elsewhere in Britain. Predominant forms noted were bottles, mainly of squarish or cylindrical shape – common site finds during the first and second centuries AD. Other forms represented in the site assemblage included bowls, of which examples of two pillar-moulded specimens were noted. A substantial class of vessel represented at Mucking was the flask or flagon, and there were several examples, mostly in plain, selfcoloured metals, although there were a number of decorated examples, mainly decorated with ribbing, and occasional slight fluting. Less common were beakers and goblets, of which two examples were identified. The remaining glass was too fragmentary to identify with any confidence.

Window glass included pieces of the gloss-matt and double gloss type, but there were a few small pieces of 'crown glass' (e.g. Cat. No. 61), hitherto only identified elsewhere in Britain at Chichester (Charlesworth 1972).

Bottles

Perhaps the commonest glass class found at Mucking was the bottle. Most of the identified pieces were from square bottles, but the rim, neck and handle is similar whether the body is square, rectangular, hexagonal, octagonal, triangular in section, or cylindrical. Illustrated pieces are marked with an asterisk.

A. PRISMATIC (RECTANGULAR)

Vessels of this class were, if not the most common of the bottle class, among the most easily identifiable at Mucking. Unless otherwise indicated, they mainly date to the later first to mid second centuries

AD. Most, if not all, are in self coloured metals, mainly bluish green or green.

*35 (130N/340E, RBII ditch). Bluish-green. Bottom of square moulded bottle with two concentric circles.

36 (133N/170E, South Rings Inner). Green. Bubbly, could be side of a prismatic bottle. Two edges grozed, indicating secondary use as a ?scraper.

48 (200N/250E, Level 0, surface find). Blue-green. Two body fragments of a prismatic bottle.

59 (280.25N/453.3E, ditch preceding RBII enclosure, Level 1). Green. Very small lower body/base fragment of a prismatic bottle with concentric design.

63 (295N/310E, RBI ditch, Level 2). Two small body fragments of a square bottle.

83 (595N/574E, Ditch F12, Level 1). Blue-green. Body sherd of prismatic bottle.

102 (730N/600E, surface find, Level 0). Fragment of a prismatic bottle.

116a (882N/273E, undated pit, Level 0). Blue-green. Fragment of a prismatic bottle.

134 (1051.6N/207.4E, undated pit, Level 0). Blue-green. Fragment of a prismatic bottle.

186 (1050N/622E, Well 4, Level 3). Blue-green. Fragment of a prismatic bottle (not melted).

190 (1053N/624E, Well 4, dark fill C). Blue-green. Fragment of prismatic bottle (not melted).

234 (2150N/920E, modern ditch, Level 1). Blue-green. Fragment of prismatic bottle, heat-affected.

250 (1063N/637E, Well 4, Level 16). Blue-green. Two scraps from the shoulder angle of a prismatic bottle.

*269 (150N/240E, RBI ditch late fill). Blue-green. Bottom of a square moulded bottle with a fragment of a square frame enclosing a circle containing a diagonal cross with expanded terminals. Second century AD.

294 (1270N/433E, possibly AS pit, Level 3). Blue-green. Body fragment of prismatic bottle.

296 (30N/360E, surface find, Level 1). Blue-green. Bottom of moulded bottle with circle enclosing four arcs forming a hollow-sided lozenge; central dot. ?Pontil mark. Second century AD.

351 (1044N/616E, Ditch A5A, Level 1). Blue-green. Body fragment of a prismatic bottle.

354 (1045N/635E, Well 4, Level 7). Blue-green. Body fragment

of a prismatic bottle.

377 (1172N/652E, surface find, Level 1). Blue-green. Side fragment from a prismatic bottle.

378 (1253N/678E, RB PG71, Level 1). Side of a prismatic moulded bottle, partly melted.

389 (1312N/761E, undated ditch, Level 1). Blue-green. Small body fragment of prismatic vessel.

395 (1657N/825E, North Enclosure ditch, Level 1). Blue-green. Side of a prismatic bottle.

452 (2050N/765E, surface find, Level 0). Blue-green. Body fragment of prismatic vessel.

454.1 (270N/480E, Level 1). Pale blue-green. Fragment of prismatic bottle.

454.2 (573N/703E, Level 0). Blue-green. Three pieces (two adjoining), probably from the side of a prismatic bottle.

493 (c. 950N/500E, surface find, Level 0). Colourless body fragment of prismatic bottle. ?Second to third century.

499 (1225N/673E, RB PG71, Level 1). Blue-green. Small body fragment from large prismatic bottle.

511 (589N/231E, RB ditch, Level 2). Blue-green. Body fragment of a prismatic bottle.

B. HEXAGONAL (NOT ILLUSTRATED)

These are far less common than either the rectangular vessels (see above), or cylindrical bottles (see below). It is essentially a variant of Isings (1957) form 50.

57 (277N/405E, RBII ditch, Level 1). Light green. Part of the side of a hexagonal bottle. Could be nineteenth century.

C. CYLINDRICAL

These vessels were slightly less prevalent at the site, and the fragments noted probably come from variants of two forms, the squat cylindrical bottle (Isings form 51a), or its taller variant (Isings form 51b).

37 (160N/350E, RBII ditch, Level 3). Blue-green. Probably large cylindrical bottle.

*145 (204N/504E, Well 1, bottom). Greenish colourless. Neck and handle fragment from a dolphin-handled cylindrical bottle. Late third to fourth centuries AD, *cf.* Price & Cottam 1998, 206–7, fig. 94.

159 (1658N/291E, undated enclosure ditch, Level 1). Greenish. Thick convex fragment of ?bottle.

183 (1033N/627E, Ditch A3A, Level 3). Body of a cylindrical

bottle. Later first to early second century AD.

249 (1050N/622E, Well 4 dark loam, Level 2). Blue-green. Lower body/base of cylindrical bottle. Later first to early second century AD.

*263 (1103N/498E, Ditch A1A, Level 3). Green. Bottom of a large cylindrical bottle with concentric wear marks. Later first to early second century AD.

352 (1045N/634E, Well 4, Level 31, Fill D). Blue-green. Body fragment of a ?cylindrical bottle. Later first to early second century AD.

353 (1045N/634E, Well 4, Level 22, Fill D). Blue-green. Body fragment of a ?cylindrical bottle. Later first to early second century AD.

366 (1051N/642E, Well 4, Level 6). Blue-green. Melted fragment of large cylindrical bottle. Later first to early second century AD.

368 (1063N/637E, Well 4, Level 4). Blue-green. Two body fragments of cylindrical bottle. Later first to second century AD.

D. UNCERTAIN BOTTLE FORMS

Most are either base or rim fragments too small to be identified as to type. They are all probably from vessels of Isings types 50 and 51.

60 (285N/630E, Kiln ditch, Level 1). Blue-green scrap, probably from a bottle.

112 (795N/206E, Ditch B40, Level 1). Blue-green. Shoulder from bottle. First to second centuries AD.

138 (1128N/148E, Ditch B5). Blue-green. Beginning of the neck of a large bottle. First to second centuries AD.

175 (900N/560E, Ditch A1A, Level 5). Folded rim and neck from a bottle; heat-affected and devitrified. First to second centuries AD.

176 (920N/770E, ditch A2B, Level 1). Blue-green. Shoulder of bottle. First to second centuries AD.

181 (985N/657E, ditch in brickearth, Level 3). Burnt scraps of ?bottle. Roman?

184 (1046N/626E, Well 4, Level 1). Blue-green. Two fragments of bottle. Burnt.

185 (1046N/626E, Well 4, Level 1). Blue-green. Two fragments of bottle. Burnt.

188 (1050N/622E, Well 4, Level 6). Body fragment of bottle. Melted. First to second century AD.

- 189 (1050N/622E, Well 4, Level 17). Blue-green. Side of bottle.
- 192 (1056N/628E, Well 4, Level 2). Blue-green. Folded neck, rim and handle of uncertain bottle. First to second century AD.
- 236 (888.5N/520.5E, uncertain feature, Level 1). Blue-green. Probably a part-melted fragment of bottle. First to second century AD.
- 241 (2232N/1050E, undated pit, Level 2). Blue-green. Worn. Fragments of multi-ribbed bottle handle, part-melted. Late first to early second century AD.
- *248 (1050N/622E, Well 4, dark fill, Level 5). Blue-green. Part of shoulder and bottom of neck of uncertain bottle. Melted. Later first to second century AD.
- *282 (1240.75N/814E, Ditch A1A, Level 1). Blue-green. Inward folded rim, partly tubular, from a very large, wide and robust bottle. Second century AD.
- 356 (1046N/626E, Well 4, Level 1). Blue-green. Shoulder of uncertain bottle. Later first to second century AD.
- 357 (1046N/626E, Well 4, Level 2). Blue-green. Melted fragment, possibly from neck of uncertain bottle. Later first to second century AD.
- 361 (1049N/633E, Well 4, dark fill above fired clay). Blue-green. Fractured and melted fragment of a handle, probably from a bottle. Later first to second century AD.
- 362 (1049N/633E, Well 4, ?A-B). Blue-green. Fractured and melted fragment, probably from a bottle. Later first to second century AD.
- 372 (1070N/578E, RB pit, Level 1). Blue-green. Fragment of bottle, very bubbly. Later first to second century AD.

Flasks

- 135 (1065N/254E, RB pit, Level 2). Blue-green. Neck and body fragment of ?unguent bottle or flask. First to third century AD.
- 203 (1145N/515E, pit in or under Ditch A1A, Level 4). Dark blue. ?Neck of a ?ribbed jug (see Price & Cottam 1998, 152–4 for possible form). First century AD.
- 278 (924.5N/829.5E, Ditch E1, Level 1). Polished ground rim of flask with three abraded bands. Colourless. Second to third centuries AD (cf. Price & Cottam 1998, 181–2, fig. 82).
- 279 (1698N/556E, undated pit, Level 1). Colourless. Weathered. Fragment from convex thin-walled vessel; two shallow wheel-cut lines. ?Globular flask. Second to third centuries AD (cf. Price & Cottam 1998, 181–2, fig. 82).
- 350 (1041N/639E, Well 4, Level 7). Greenish colourless. Two

joining fragments from ?flask. Second to third centuries AD.
460 (Unlocated). Unusual folded rim, probably from a flask.

Jugs and Jars

142 (1198.5N/274E, Ditch late loam fill, Level 1). Blue-green. Fragment of a wide lower body and open base-ring, ?edge of domed base. Convex jug or jar. Later first to mid second century.

144 (204N/504E, Well 1, bottom). Blue-green. Smoothed rim of jar. First to second century AD.

*242 (1141N/639E, posthole). Yellow. Fragment of a ribbed globular jug or jar. Late first to early second century AD (*cf.* Price & Cottam 1998, 137–8, fig. 58 and 150–2, fig. 66 for possible alternatives).

264 (200S/425E, Well 7, Level 1). Translucent olive green. Worn. Splayed, fire-rounded rim, neck and handle scars of a twohandled globular jug. Fourth century (see Price & Cottam 1998, 167–8, fig. 74).

270 (388N/506E, Enigma, Level 2). Blue-green. Rim and handle of a jug. Second to third centuries AD.

274 (920N/775E, Ditch A2B, Level 4). Blue-green. Asymmetrical rim, edge folded in and funnel neck of jug with ? pouring spout; edge of handle. Late second to third centuries AD (*cf.* Price & Cottam 1998, 159–61, fig. 70b).

276 (1919N/972E, undated ditch north of North Enclosure, Level 2). Green. Neck of jar with single horizontal trail. Late Roman.

281 (1180N/838E, Ditch A1A, Level 2). Blue-green. Convex body fragment with two handle claw points. Jug. ?First to second centuries AD.

391 (1394N/616E, Ditch A2!, Level 4). Greenish-yellow. Part of concave base from jug or jar. Later first to mid second century AD.

Beakers and Cups

137 (1092N/298E, PG57). Blue-green. Lower body and base edge of a ?conical beaker. Mould blown. Vertical mould seam; one pointed boss above a horizontal cordon. Probably AD 70–90; though may be from a vessel similar to that illustrated as Price & Cottam (1998, fig. 17b); if so, dated late Neronian/early Flavian.

359 (1048N/632E, Well 4, fill F1, Level 39–40). Colourless

greenish. Body fragment of ?cup. Late first century AD.

Bowls

30 (176N/182E, Masonry Building A, Level 1). Blue-green. Six fragments of pillar moulded bowl. Partly devitrified. Later first century AD (*cf.* Price & Cottam 1998, 44–6, fig. 45ai).

61 (295N/400E, surface find, Level 0). Bluish-green, good metal. Fire-rounded edge of a straight-sided vessel with ? outplayed rim. ?Bowl. ??Crown window pane.

*260 (742N/242E, ditch not marked on Atlas, Level 1). Bluegreen. Rim of a pillar moulded bowl, Ising form 3. Later first century AD (*cf.* Price & Cottam 1998, 44–6, fig. 45ai).

262 (1050N/622E, Well 4, dark fill, Level 2). Blue-green. Basing of shallow bowl. Late first to third centuries AD.

267 (178N/145E, RBI ditch). Blue-green. Part-melted firerounded rim of bowl. Trail on upper body. Late second to fourth century AD.

Unspecified Vessels

14 (365N/320E, surface find). Olive green. Very bubbly. Body of a bulbous vessel. Possibly Anglo-Saxon.

47 (200N/408E, ?pit). Colourless. Fragment from near bottom of vessel, possibly a cup or beaker.

62 (295N/310E, RBI, Level 2). Blue-green. Convex body fragment from thin vessel. Probably first to second centuries AD.

182 (1032N/446E, Ditch A2, Level 1). Pale blue-green. Convex shoulder of a large vessel. First to third centuries AD.

193.1 (1058N/625E, Well 4, Level 3). Convex body fragment of ?flask. First to third centuries AD.

193.2 (1058N/625E, Well 4, Level 3). Blue-green. Flat body fragment of ?prismatic bottle. First to second centuries AD.

194 (1061N/246E, Ditch B2, Level 1). Blue-green. Fragment of folded rim from a flask or jug. First to second centuries AD.

198 (1087N/374E, ditch B27, Level 1). Dark blue. Body fragment possibly from tubular-rimmed bowl (see Price & Cottam 1998, 78–80, fig. 25 for the form). The colour suggests it to be a Neronian or Flavian vessel.

199 (1083N/366E, pit cut by ditch B27, Level 2). Pale blue-green. Convex body fragment with shallow rib. Possibly from

jar, jug or bowl. Later first to second century AD.
 200 (1125N/820E, Ditch A1A, Level 1). Smoky, colourless. Four sherds, one from below the curved rim. Date uncertain.
 202 & 373-6 (1125N/820E, Ditch A1A, Level 2). Colourless. Total of six body fragments, one curved, all probably from same vessel. Date uncertain.
 259 (1045N/626E, Well 4, Level 6). Blue-green. Two glass fragments melted together. First to second centuries AD.
 284 (1640N/1020E, North Enclosure ditch, Level 0). Yellowgreen. Fire-rounded rim, possibly from fourth-century jug or flask.
 332 (168S/257E, undated ditch, Level 1). Green colourless. Convex body fragment. ?Second to third centuries.
 358 (1048N/632E, Well 4, Fill F1, Level 35-6). Dark blue. Three sherds from a vessel. First century AD.
 365 (1050N/622E, Well 4, Level 4). Vessel glass distorted by fire. Roman.
 367 (1058N/625E, Well 4, Level 1). Vessel glass distorted by fire. Roman.
 380 (1250N/789E, Ditch A1A, Level 6). Blue-green. Concave base of vessel. ?First to second centuries.
 381 (1254N/781E, pit cut into Ditch A1A, Level 5). Blue-green. Blown vessel with very thin convex body. ?First to second centuries.
 386 (1275N/725E, Ditch A1A, Level 4). Blue-green. Small convex body fragment. First to third centuries AD.
 390 (1320N/665E, surface find, Level 0). Blue-green. Small body fragment of cylindrical vessel.

Uncertain Forms

346 (950N/740E, Well 6, Fill G, Level 10). Shattered granules.
 364 (1050N/635E, Well 4, Dark fill C, Level 19). Shattered chips.
 369 (1063N/637E, Well 4, light fill, Level 13). Granules.

Unclear (melted)

187 (1050N/630E, Well 4, Level 2). Melted scrap. Roman.
 191 (1053N/635E, Well 4, Level 4). Pale blue-green. Melted scrap from ?bottle. First to second centuries AD.
 355 (1046N/626E, Well 4, Level 4). Two melted fragments.
 360 (1049N/633E, dark fill above fired clay, Well 4). Blue-green. Fractured and melted fragment.

Jewellery and Beads

- 74 (386.6N/506.75E, Enigma, Level 3). Opaque green-blue. Wound ring, possibly a finger-ring or bead.
- 128 (360N/335E, RBI ditch, loam, Level 1). Opaque green segmented bead (three segments). Late Roman.
- 129 (382N/509E, Enigma, Level 1). Dark opaque green, very small discoid bead. Late Roman.
- 136 (1084.5N/321E, PG57 butt, Level 1). Opaque bluish-green annular bead.
- 483 (55S/456E, CD3, dark fill in central chamber above chalk floor, Level 1). Green wound cylindrical bead with tapering central perforation. c. 11 × 3mm.
- 485 (1167N/833E, Ditch A1A, Level 2). Faience, half a melon bead. First to second centuries AD.
- 487 (734N/644E, RB 'banana' pit, Level 2). Blue shattered bead.

Window Glass

- 11 (22N/310E, RBII ditch, late outer fill, Level 1). Blue-green. Piece of window glass with one grozed edge. Matt glossy.
- 116b (882N/273E, undated pit, Level 0). Greenish coloured. ? Matt glossy window glass.
- 120 (1030N/103E, PG51, Level 1). Greenish colourless. Small fragment of ? matt glossy window glass.
- 277 (1775N/1050E, North Enclosure ditch extension, Level 1). Blue-green. Distorted by heat. Roman.
- 292 (1246N/907E, Ditch E1, Level 1). Matt/glossy window glass.
- 331 (140N/540E, Kiln ditch, Level 0). Dark greenish, edge fire-rounded, double glossy window glass. Third to fourth centuries AD.
- 335 (200S/425E, Well 7, gravelly fill, Level 7, 15–36"). Fragment of blown window glass. Third to fourth centuries AD.
- 470 (200S/425E, Well 7, below 18"). Blue-green matt glossy window glass.

Pottery

Estimated to involve more than 140,000 sherds, the scale of Mucking's Romano-British pottery assemblages is vast. The degree to which they and the

kilns dominated much of the site's earlier presentation has been outlined in [Chapter One](#), as have been the challenges posed by the eventual assembly of its pottery series.

***Samian Wares* Joanna Bird, with a report on the stamps by Brenda Dickinson⁹**

The excavations at Mucking produced a large amount of samian, much of it consisting of relatively small and abraded sherds (see [Fig. 3.34](#) for overall distribution and [Fig. 5.12](#) for stamped sherds; [Fig. 3.40](#) shows the notebook recording). The date range of this pottery is summarised on the accompanying graph ([Fig. 3.11](#)), which is based on the 153 stamped and decorated vessels recovered, since the number of pots involved can be calculated with reasonable certainty. The usual pattern for the distribution of samian by date on Romano-British sites has been discussed by Marsh (1981), and its relationship to the supply of samian clearly demonstrated. Mucking differs from the normal pattern in having a relatively small amount of material dating from the mid to later first century, but exhibits the mid-Antonine peak found elsewhere. This suggests that first-century occupation at Mucking was on a small scale relative to its later development.

The first-century samian all came from La Graufesenque in South Gaul, and included five identifiable stamps (Nos. 19, 31, 36, 42 & 46) and a small amount of decorated ware, including a bowl of Germanus i ([Fig. 3.13](#), No. 1). Two plain vessels are of interest for their early date, a Drag 17 with rouletted bands, of Tiberio-Claudian date, and a Ritterling 9 that is probably Claudian. Little samian from the early

second-century Central Gaulish potteries at Les Martres-de-Veyre was recovered, with only three attributable decorated bowls, in the styles of Drusus i, Igocatus (residual in Well 4) and perhaps X-11, and a small quantity of plain forms.

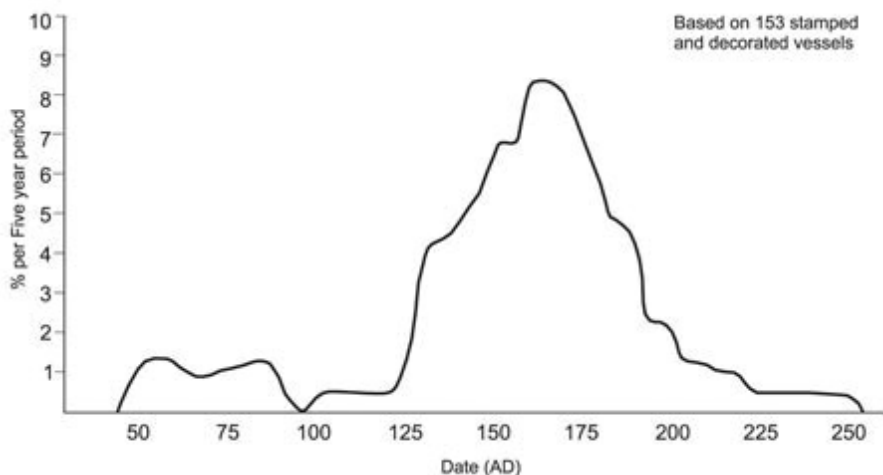


Figure 3.11. Plot of samian ware by date, as percentage of total samian assemblage by five-year period.

By far the greater part of the samian came from the Central Gaulish workshops at Lezoux. Apart from the pottery from the Well 4 group and the burials, discussed separately below, there were six identifiable stamps on plain vessels, all of mid- to late Antonine date (Nos. 26, 27, 32, 35, 41 & 48) and one on a decorated bowl (No. 34, by Laxtucissa). The decorated pottery dated from the Hadrianic to later Antonine period, and included bowls attributed to the Quintilianus i group, X-5 (one with traces of a possible signature; [Fig. 3.13](#), No. 3), Docilis i/Doccalus, Sacer i-Cinnamus ii, the Cinnamus ii group (with the highest number, five bowls), Laxtucissa, Albucius ii,

Paternus v, Iullinus ii, Doeccus i and perhaps X-6 and Iustus ii. A comprehensive range of plain forms was recovered, including a small number of the latest forms such as the mortarium forms Drag 43 and 45, dating after c. AD 175.

The East Gaulish wares and the single stamped sherd of Colchester samian recovered from the burials are considered separately below. The East Gaulish samian from the rest of the site ranged in date from the Hadrianic period up to the first half of the third century, and it came from several production centres; one stamp could not be assigned to a pottery (No. 38). There was a single decorated bowl by the Satto ii–Saturninus i group of Chémery and Mittelbronn, recovered from Well 4 where it was probably residual. La Madeleine was represented by a small group of plain wares. The Argonne ware included four decorated bowls by the mid- to later Antonine potters Cesatus ii, Germanus iii (Fig. 3.14, Nos. 7 and 8) and Germanus iii, Tribunus ii or Tocca (Fig. 3.14, No. 6), all of whom worked at Lavoye or Avocourt; a lionhead spout on a Drag 45 mortarium was identified by the late M. Pierre-Henri Mitard as an Avocourt product dating to the end of the second or beginning of the third century. There was also a small amount of later, fourth-century, Argonne ware, including three bowls of Chenet's form 320 (1941) with roller-stamped decoration, although all the fragments seem to derive from features of Early Anglo-Saxon date.

The Trier wares present were mainly of Hadrianic–Antonine date, and included four stamps (Nos. 1, 14, 29 and 37) and a decorated bowl of the anonymous Werkstatt II, Serie D; there was however a decorated

sherd (Fig. 3.14, No. 9) and a small amount of plain ware which could date into the third century. The bulk of the later samian, of later second- to mid third-century date, came from Rheinzabern, and included two identifiable stamps (Nos. 20 and 28) and decorated bowls attributed to BF Attonus, Cerialis v and possibly Helenius ii. There was a wide range of Rheinzabern plain forms, including a Drag 31/Ludowici Sa with a 'Strichstempel', a simple slot impressed in place of a stamp and likely to date towards the middle of the third century (Bird 1993, 2–3), and cups of form Drag 41 decorated with incised ornament, again probably of third-century date (Bird 1993, 4). Of particular interest is a flagon sherd in Rheinzabern ware, decorated with ivy leaves in white paint, a type of decoration that is rare in Britain and probably dates to the third century (*cf.* Bird 1993, 8).

There were very few graffiti (see Going, below), and only a small number of sherds had the rounddrilled holes or swallowtail notches that indicate repair with lead wire or brackets. A few vessels had been cut down for reuse as lids or counters, and one had cuts over the break suggesting that it might have been used to sharpen needles or small blades.

The Well 4 Group

The most important group of samian came from Well 4. There was a small amount of material of Flavian to Hadrianic date, some of it recorded from the lower levels, but the greater part of the samian consisted of a large group of broken Lezoux wares, almost all heavily burnt and some blistered along the broken edges from exposure to high temperatures. On a simple sherd count, this burnt samian consisted of a maximum of 765 vessels, though the number of cross-joins between different contexts within the well which were noted for the stamped decorated bowls of Albucius ii and Quintilianus i (Stamp

Nos. 12 and 52; Fig. 3.13, No. 4 & Fig. 3.14, No. 5), 17 and 18 contexts respectively, suggests that the total number of vessels may originally have been around a twentieth of that number. Apart from the two stamped bowls, there was only one other decorated bowl, a Drag 37 in the style of Rentus (Fig. 3.13, no. 2), and a small number of undecorated fragments of Drag 37 and perhaps Drag 30, a most unusually low amount of decorated ware for such a large assemblage.

The most common forms were Drag 33 (including nine potters' stamps, Nos. 3, 10, 15, 17, 21, 33, 53, 54 & 57) and Drag 31 (eight stamps, Nos. 9, 22, 25, 40, 47, 51, 64 & 72), which each accounted for around 25% of the total. The larger Drag 31R (one stamp, No. 50) made up only 4%, while Drag 18/31 (two stamps, Nos. 16 & 49) accounted for 7%, and smaller sherds that could not certainly be identified as Drag 18/31 or 31 formed a further 8%. The Walters 79 series (six stamps, Nos. 6, 7, 8, 43, 60 & 61) made up 12%, the smaller Walters 80 series (five stamps, Nos. 4, 5, 11, 13 & 18) 3% and the barbotine-decorated dish Drag 36 a further 5%. These proportions are to be expected for a group of this date, but there were also several examples of the uncommon forms Drag 46, including the variant type with handles, and Drag 42 dishes, some with handles and some with barbotine decoration; together these made up 2% of the total. There was too a relatively high proportion, around 5%, of Déchelette 72 jars, some with incised decoration. It is also noteworthy that, while there were 32 identified potters' stamps, ten of them were of a single potter, Albucius ii. These unusual features, together with the scarcity of decorated bowls, suggest that this is not a normal rubbish deposit, and it may have formed the stock of a shop or store that had burned down, with the debris dumped in the well. It is possible that there was some votive element in choosing a well for this purpose, perhaps to avert such ill fortune in the future. The dates of the potters' stamps and the range of forms present, including the low numbers of Drag 31R and the absence of the late mortarium form Drag 45, indicate a date for the group of c. AD 160–70.

The Burials

The complete or near-complete vessels that had been placed with burials came from several different potteries and ranged in date from the Hadrianic–early Antonine period to the middle of the third century. With the exception of a single incised jar, all were plain forms, and a number of them, including the three unstamped Rheinzabern vessels that date from the first half of the third century (Drag 33 from Cremation 82 and Grave 899, Drag 38/Ludowici Si from Cremation 892), showed signs of considerable wear before deposition. Interestingly, the 13 stamps included three pairs of stamps

of the same potter, Minutus of Trier (Stamps Nos. 44 & 45, both die 3a, on Drag 31/Ludowici Sa from Cremation 1070 & CD3), Tituro of Lezoux (Nos. 58 & 59, both die 5b, on Ludowici Tg and Tx from Graves 899 & 903), and Vagi-ro/Vagirus of Lezoux (Nos. 62 & 63, both die 7a, on Walters 79 and Drag 31 from Graves 898 & 899). The other stamped vessels came from Lezoux (No. 2, Aestivus on Walters 79 from Grave 899, and No. 56, Saturninus ii on Drag 31 from Cremation 83), possibly La Madeleine (No. 30, Glosabinia on Drag 18/31 from Grave 903, and No. 55, Remicus on Drag 33 from Grave 899), the Argonne (No. 24, Decmus iv on Drag 18/31 from Grave 899), Trier (No. 39, Mainina on Drag 33 from Grave 899) and Colchester (No. 23, Cunopectus on Ludowici Tx variant, from Grave 902).

The most interesting vessels came from Cremation 1076. The first of these was a jar of Ludowici's VS series (Fig. 4.64) decorated with incised ornament, an eight-armed star of narrow palm-leaves alternating with narrow vertical palmleaves, each repeated four times; a date in the first half of the third century date is likely. The jar was distorted and abraded. The second vessel comprised the body and base of a plain flagon and probably belonged with the rim found near the stone coffin (in the area of 538N/471E; Fig. 4.70). The conical rim has three pairs of grooves on the neck, and is a type made at Trier around the middle of the third century; only four other examples have been recorded from Britain, from Dorchester (Dorset), Caister-on-Sea (two examples) and South Shields (Bird 1993, 10–11).

Catalogue of Samian Stamps by Brenda Dickinson

Note that numbers in brackets refer to the MPX computerised catalogue as indicated on the illustration (Fig. 3.12). The superscript a, b and c, after the name of the pottery indicate: a stamp from a die used at the pottery in question, b stamps from dies other than this are known from the pottery in question, c the pottery of origin is deduced from the evidence of fabric, distribution, etc. All the stamps which are not illustrated by line drawings are represented in Samian5 font.

1. (1148) Aenisatus la 33 [ΛNI]SATVSF Trier^a Pont-des-Rèmes^b Heiligenberg^b

The site evidence for this stamp suggests that it comes from a die used only at Trier. The forms associated with it, in particular 18/31 and 27, make it likely that Aenisatus began work at Trier, whence he presumably moved to Heiligenberg and finally to the Argonne. His name is usually spelt without an E, but one stamp, whose distribution suggests origin at Trier, reads ΛENISATV. c. AD 140–65.

2. (Grave 899) Aestivus 3c 79 AESTVIM Lezoux^a

Aestivus' stamps are recorded at Pudding Pan Rock and Hadrian's Wall Period Ib. His forms include 31R, 79, Tg and occasionally 27. c. AD 155–95.

3–8. (1130 & 1168; 1150; 1154; 1144 & 1145; 1156 & 1418; 1412) Albucius ii 6a 33; 80 or Tx; 80; 79 or Tg (3 examples)

ALBVCI Lezoux^a

Albucius' output includes forms such as 31R and Tx, and a few examples of form 27. c. AD 145–75.

9–10. (1137 & 1160) Albucius ii 6b 31; 33 ALBVC[I]; [ALB]VCI Lezoux^a

A stamp noted on forms 31R, 42, 80 and Tg. There is one example from Balmuilty. c. AD 145–75.

11. (1143) Albucius ii 6d 80 ALBVCI Lezoux^a

There is no site dating for this stamp, but its use on forms 31R, 80 and Tx suggests a range c. AD 150–75 or perhaps 160–75.

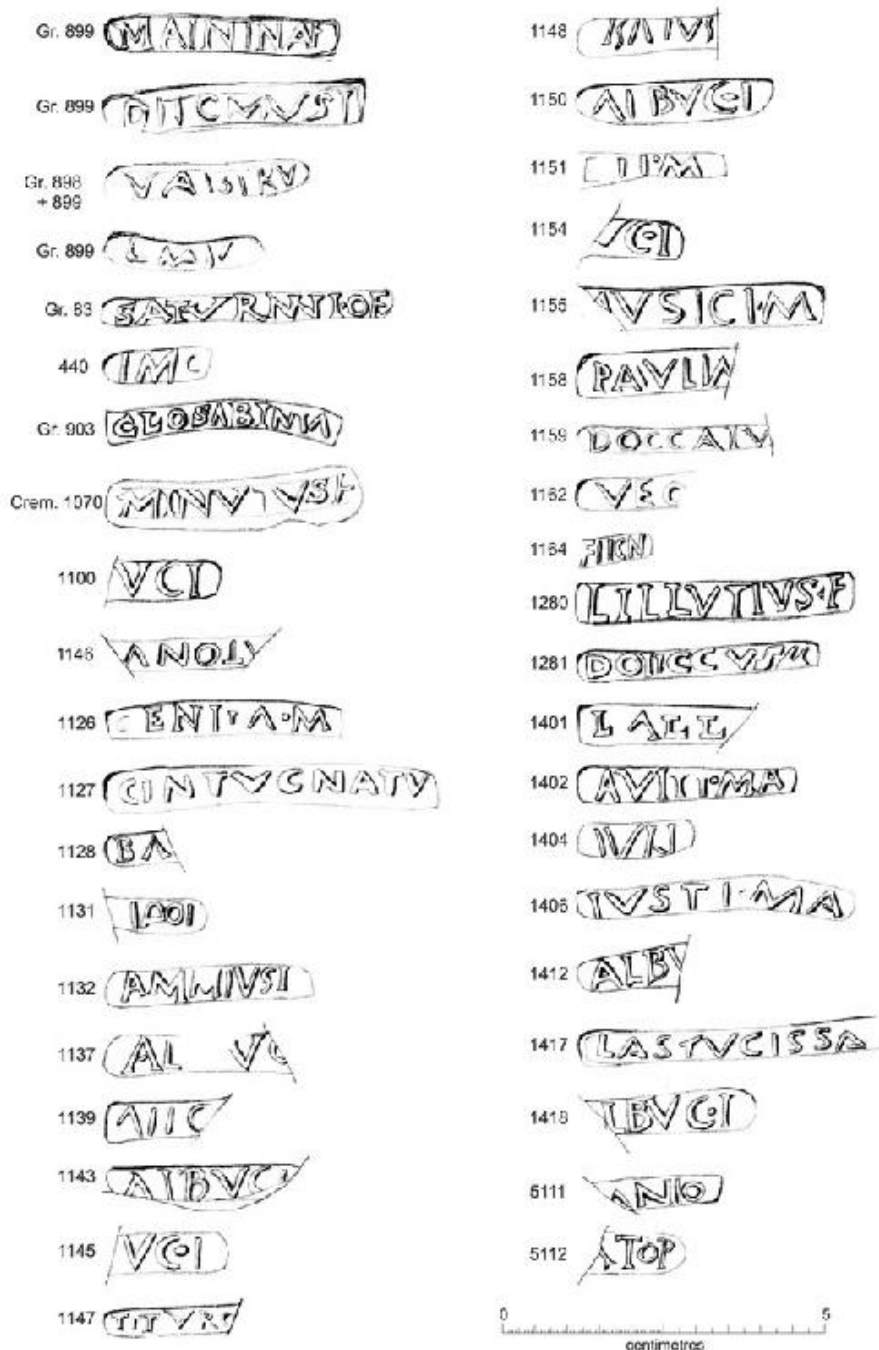


Figure 3.12. Samian stamps.

12. (621, 765, 1157, 1168, 1186, 3943, 3945, 3950, 3960, 3963, 3964, 3966, 3972, 3974, 3985, 3996 & 4004) All stamps

from same vessel. Albucius ii 6h 37 ALBVCI Lezoux^a

The stamp is placed within the decoration (cf. Stanfield & Simpson 1958 pls. 120–3) c. AD 145–75.

13. (1138) Albucius ii 6j 80 or Tx]BVCI Lezoux^b

No other examples of this stamp have been noted by us. c. AD 145–75.

14. (1132) Ammius ii 1a 18/31 AMMIVS† Trier^b

Most of this potter's work occurs in Holland, though there is one stamp from London and another from York. Probably c. AD 130–70 on the forms, which include 18/31 and 18/31R.

15. (1139) Aticiso la 33 ~~ATIC[ROI]~~ Lezoux^c Apart from one form 27, all other examples noted are on form 33. Aticiso is not known to have used another die. c. AD 140–80, from the fabrics.

16. (1402) Avitus iv lc 18/31 AVITI·MA Lezoux^b

Like many of Avitus' stamps, this one is known from Scotland (Ardoch). His commonest plain forms are 18/31, 27 and 31. His decorated ware is mainly Hadrianic. c. AD 120–50.

17. (1128) Banoluccus la 33 ~~BA[NOLVCCI]~~ Lezoux^c

For dating evidence see No 18. c. AD 150–75.

18. (751, 1146 & 1420) Banoluccus 1b 80 or Tx ~~BANOLVCCI~~ Lezoux^c

Banoluccus' site record includes Balmuilty and an early Antonine pit at Alcester. He made forms 18/31, 18/31R, 31, 33 and 80. Banoluccus seems to have started making form 80 rather earlier than the majority of Lezoux potters. c. AD 150–75.

19. (1136) Calvus i 5kk' 33 ~~oFCAK~~ La Graufesenque^b

Only three stamps from the complete die have been noted, one from the Nijmegen fortress. There is no independent dating evidence for the broken die. c. AD 65–90.

20. (1127) Cintugnatus ii 3a 31 CINTVG NATV

Cintugnatus ii was an itinerant potter, and used this die at no fewer than six different kiln sites in East Gaul. Brian Hartley has suggested that the sequence is: Chémery-Faulquemont, Lavoye, Haute-Yutz, Heiligenberg, Ittenweiler (or *vice versa*), Rheinzabern (Hartley 1977, 255–6). The condition of the lettering on the Mucking stamp suggests that it came from a worn die and so probably from Rheinzabern. Precise dating is impossible, but his activity at Rheinzabern is likely to have been c. AD 165–80.

21. (1133) Cracuna i 2a 33 [CRACVN]A·F Lezoux^a

A stamp found mainly on forms 18/31 and 27. It is common in Scotland, and appears in early Antonine contexts at Alcester and Castleford. c. AD 130–55.

22. (1135) Criciro v la 31 [CR̄C̄IRO·]OFI Lezoux^b

A stamp used on forms 18/31, 27 and 31R with one example from Mumrills. Criciro's decorated ware is common in Scotland and one of his bowls occurs in an early Antonine pit at Alcester. c. AD 135–70.

23. (Grave 902) Cunopectus 2a Tx CV̄VO·TC·LI Colchester

Most of Cunopectus' stamps have been found at Colchester (Hull 1963b, 87). The name always looks somewhat illiterate, but there are clearer dies obviously belonging to the same potter. His forms include 31, 79/80, Tx and Tx/Tg. A date c. AD 160–200 is likely.

24. (Grave 899) Decmus iv 2a 18/31 DIICMVSF

This stamp has been found at Lavoye and Decmus almost certainly worked there, but die 2a was probably also used at Haute-Yutz and another of his stamps occurs at Sinzig. The use of this particular die on forms 79 and 80 suggests a date c. AD 160–200.

25. (1152 & 1159) Docalus 6a 31 DOCCALVSF Lezoux^b

Docalus' output includes a high proportion of form 27. His stamps occur in the Rhineland and in early Antonine contexts at Alcester and Castleford. c. AD 135–60.

26. (704) Do(v)eccus i 11b 31 DOV̄[IICCV̄S] Lezoux^b

A stamp recorded on forms 31R and 79, and at Catterick and Malton. c. AD 170–200.

27. (1281) Do(v)eccus I 13c 31R DOĪCCV̄S Lezoux^b

A stamp also known on form 79/80. The site records include Chester-le-Street and Halton Chesters. c. AD 170–200.

28. (1409) Favvo la 32 etc FAVVOFE Rheinzabern^a

Favvo's use of forms 31R (Sb), 32 and 40 suggests that he worked c. AD 160–229.

29. (1423) Giamatus ii 2a 33 [G]IAMAT·[F] Trier^c

A stamp used mainly on form 33, though there are a few examples on form 18/31. c. AD 120–60?

30. (Grave 903) Glosabinia la 18/31 GLOSABINIA

The name is not completely certain, though the above seems the most likely. There is no conclusive evidence for a pottery (? La Madeleine) and nothing in the way of site dating. All his known stamps seem to be on form 18/31 or 18/31–31. Probably c. AD 130–60.

31. (1404) Iulius ii 13c 27 IV̄NI La Graufesenque^b

No other examples of this stamp are known, but the rest of his

output seems to have been mainly Flavian. However there is one stamp from the pre-Flavian cemeteries at Nijmegen.c. AD 65–90.

32. (1406) Iustus ii 2b 31 IVSTIMA Lezoux^a

There are many examples of this stamp on form 31R, including one from Pudding Pan Rock. c. AD 160–200.

33. (1401) Lallo la 33 LALL[O-F] Lezoux^c

A stamp used on forms 18/31, 33 and 31. c. AD 150–80.

34. (1421, 3959 & 3986) Laxtucissa 5a 37 [L]AXTVCI[F (retrograde) Lezoux^a

A plainware stamp within the decoration. It occurs also on forms 27, 31R, 79 & 80. c. AD 150–75.

35. (1417) Laxtucissa 13a 79 etc. LAXTVCISSA Lezoux^a

A stamp used on forms 31R, 79R and 80 and so probably a little later than No. 34, c. AD 160–75.

36. (1164) Licinus 25c 27 [O]FLICN La Graufesenque^a

One of Licinus' less common stamps, almost always on form 27; there is one example from Waddon Hill and several from Camulodunum. c. AD 35–65.

37. (1280) Lillutius 3b 18/31 LILLVTIVS-F Trier^b

This particular stamp occurs on the early variety of form 32, which has a slight kick in the centre of the base. c. AD 160–180.

38. (1410) Magnus ii 2a 31 MANNI

It is not yet possible to decide how many potters named Magnus worked in East Gaul. There are stamps from Haute-Yutz, Heiligenberg, Kräherwald and Rheinzabern which could in theory belong to one man, an itinerant potter like Cintugnatus ii (No. 20 above). The only other example of this particular stamp is on a normal form 32. This suggests a late second- or early third-century date, but a range c. AD 155–260? covers all the possibilities.

39. (Grave 899) Mainina la 33 MAININAF Trier^a

There is little dating evidence for Mainina, but his forms, mainly 18/31, 27 and 31, suggest that he was not one of the later potters at Trier. 1a occurs in Period I at Zwammerdam (before about AD 175) and a single example of form 80, stamped with a different die, indicates activity down to AD 160, or later. c. AD 145–75.

40. (1149) Malluro i 8b 18/31 MALLVR/I Lezoux^b

A stamp recorded on forms 18/31R and Tg. Malluro's output also includes forms 18/31 and 27. His stamps occur in the Rhineland and at Bar Hill and Halton Chesters. c. AD 130–65.

41. (1413) Maximinus i 9a 33 MAXMIV Lezoux^a

A stamp recorded from Hadrian's Wall and on forms 31R and 79. It is also known from Cramond, where it might have belonged to the Severan occupation. One of his other stamps occurs in a grave at Sompting, Sussex, with stamps of Lezoux and Rheinzabern potters and a scarcely-used coin of Geta as Caesar (Ainsworth & Ratcliffe-Densham 1974, 312). c. AD 170–210?

42. (1163) Mercator i 7b or 7b' 18[<ME>RC]ATO La Graufesenque^b

This is more likely to come from the complete die, since the broken die has so far only been recorded on cups. 7b occurs at Brecon and on form 29, 7b' is known from the main site at Corbridge. c. AD 70–110.

43. (5112) Mercator iv 5a 79 etc [MERC]AToR Lezoux^a

This stamp appears on forms 31R and 79 but also (once) on form 27. It has been noted on Hadrian's Wall and at Pudding Pan Rock. c. AD 160–200.

44–45. (CD3; 1070 cremation) Minutus 3a 31/Sa (2 examples) MINVTVS·F Trier^a

This stamp appears on forms 31R and 32 etc and has been noted from Niederbieber. Late second- or early third-century.

46. (1407) Murranus 8i 18 OF OFM[TRA] La Graufesenque^b

Murranus' stamps are almost certainly all pre-Flavian, though a few turn up in Flavian contexts. One appears in Period I at Verulamium and another in a Claudio-Neronian context at La Graufesenque. This particular stamp occurs at Camulodunum and there are several examples on form 29. c. AD 45–90.

47. (1155) Musicus ii 2b 31 [M]VSICI·M Lezoux^c

A stamp recorded on Hadrian's wall and in a pit of c. AD 150–160 at Alcester. His rouletted dishes are of the form 18/31R type rather than 31R and one of his stamps occurs on form 27. There is one possible example of form 79, stamped with a different die, which would suggest that Musicus was still at work c. AD 160, or later. c. AD 140–70.

48. (1411) Muxtullus Ia 33 ·MVXTVL[LI·M] Lezoux^b

A stamp from one of Muxtullus' later dies. It occurs on Hadrian's Wall, at Chester-le-Street and in the Wroxeter Gutter, and was used on forms 18/31R-31R and 31R. Earlier stamps appear on form 27, in Scotland and in early Antonine contexts at Alcester and Castleford. c. AD 140–75.

49. (1134 & 1422) Nicephor ii 2a 18/31 NICEPHO[R·F] Lezoux^a

The presence of this stamp at sites in the Rhineland and its use on forms 18/31, 27 and 42 suggest that it was current in the first half of the second century. However its occurrence on form

80 indicates a range c. AD 130–65.

50. (5111) Paulianus i la 31R [PAVLI]ANIO Lezoux^b

This stamp is also known on form 80. One of his others is on the rim of a bowl from Chesterholm in the style of Do(v) eccus i. c. AD 160–200.

51. (1158) Paullus iv 5a 31 PA\VL[*M*] Lezoux^a

Paullus' stamps occur in a group of burnt samian of c. AD 140–150 at Castleford. His decorated ware is connected stylistically with Cerialis ii and the early work of Cinnamusii. c. AD 135–65.

52. (784, 1168, 3964, 3947, 3952–3956, 3968, 3983, 3988, 3990, 3993 & 3999–4002) All sherds are from the same vessel. Quintilianus i 1b 37 QVINTILIANI[*M*]←← (retrograde) Lezoux^a

This stamp was used on both decorated ware and dishes (forms 18/31, 18/31R and 31). The site record includes Inveresk, South Shields (2) and Castleford (in a group of burnt samian of c. AD 140–150). c. AD 125–55.

53–54. (1131; 1141) Reburus ii 4a 33 (2 examples) [REBVR]RI~~Q~~OI Lezoux^a

A stamp used on forms 27, 31R and 79. Reburus' output includes many examples of form 27. His work occurs on Hadrian's Wall and in a mid-Antonine group at Lezoux. c. AD 140–70.

55. (Grave 899) Remicus 1b' 33 ^PEMICI

The distribution of Remicus' stamps suggests that he worked at La Madeleine, though none have actually been found there. The number of examples in Britain is high, all in the eastern part of England. His output consists of forms 18/31, 27, 31 and 33. c. AD 130–60.

56. (Burial 83) Saturninus ii lc 31 SATVRNI-OF Lezoux^a

Saturninus' stamps occur on forms 31R, 79R and 80, in the Wroxeter Forum destruction and at Pudding Pan Rock. There is no dating evidence for this particular stamp. c. AD 160–200.

57. (1126) Senea la 33 SENIA-M Lezoux^c

A stamp used mainly on form 33. It occurs at Binchester and in a group of burnt samian of c. AD 170 at TÁC (Hungary). One of his earlier stamps was used on forms 18/31 and 27 and on a mould with decoration in the style of the Quintilianus i group. c. AD 135–70.

58–61. (Grave 899; Grave 903; 1147 & 1419) Tituro 5b Tg; Tx; 79 etc (2 examples) TITVRONIS Lezoux^b

A late Antonine potter making forms 31R, 79, 79R, 80, Tg and Tx. There is no independent site dating for this die, though

others have been noted from Hadrian's Wall and the Wroxeter Gutter. c. AD 170–200.

62–63. (Grave 898; Grave 899) Vagi-ro/Vagirus 7a 79; 31 VAGIRV Lezoux^b

A stamp noted several times on form 80. He also made form 27. c. AD 155–85.

64. (1151 & 1162) Vegetus iv 2b 31 VEGETI·M Lezoux,^c Vichy Terre-Franche^b

Vegetus iv worked in the mid to late Antonine period, unlike his Central Gaulish homonym who made decorated ware which is mainly Hadrianic. He probably worked at Lezoux as well as Vichy, since several of his stamps occur in Britain. This particular one was used on forms 31R, 80 and Tx and has been noted from Newstead. c. AD 145–75.

Unidentified

65. (440) 27 IAR South Gaul, second half of the first century.

66. (1405) 15/17 or 18 I·F South Gaul, second half of the first century.

67. (723) 33 I·M Central Gaul, Hadrianic or Antonine.

68. (1129) 18/31 GI Central Gaul, Hadrianic or Antonine.

69. (1142) 33 IOMIN Central Gaul, Hadrianic or Antonine.

70. (1153) 31 INI Central Gaul, Hadrianic or Antonine

71. (1408) 79R or TgR, followed by JM.... Central Gaul, later Antonine.

72. (5110) 31 ICA...M Central Gaul, Hadrianic or Antonine.

73. (11321) 31 PI Central Gaul, Hadrianic or Antonine.

74. (1161) 31/Sa B...RRVS..? East Gaul, probably Rheinzabern, later second–early third century.

75. (1416) 38 etc. JXX East Gaul, probably Rheinzabern, later second–early third century.

Catalogue of the Illustrated Samian

1. Drag 37 (Diam. 21cm) in the style of Germanus i of La Graufesenque. A stamped bowl from Clermont Ferrand is in similar style, and includes the ovolo, both lions and the lioness, the rocks, the wreath festoons, arranged as arcades over the same masks, and the little dolphin terminal; the wreath festoons at the base have different contents (Mees 1995, Taf. 70.1). Similar spirals are on Taf. 78.10, and the berries and stag on Taf. 85.2. The small hounds may be new to his repertoire. c. AD 65–90 (context 397).

2. Drag 37 (Diam. 17cm) in the style of Rentus of Lezoux. The ovolo, leaf and border are on a stamped Rentus bowl from Paris

(Rogers 1999, pl. 98.1) and the lyre and tier of cups on a bowl in his style from Ovilava, with what may be this figure (Karnitsch 1959, Taf. 34.3). The terminal of the festoon, apparently a cup with an astragalus above, is on a Rentus-style bowl from Kempston, Beds (pers. comm. Brenda Dickinson, who kindly identified this bowl as the style of Rentus). c. AD 120–45; burnt (Well 4, context 3957).

3. Drag 37 (probably all one bowl) in the style of the anonymous potter X-5 of Lezoux, with traces of a signature below the decoration. The ovolo, border and terminal are on Rogers 1999, pl. 132.1, with what is probably the same lion; the triple festoon is Rogers 1974, type F83. c. AD 125–50 (contexts 695, 11121 & 11310).

4. Drag 37 (Diam. 17cm) with a retrograde stamp of Quintilianus i of Lezoux in the mould below the decoration (stamps report no. 52). The ovolo, seated figure, rosette and border are on Stanfield & Simpson 1958, pl 68.3, the vine scroll and the leaf on pl. 69.13. The ichneumon to right is on Rogers 1999, pl 93.24, the one to left may be the rather indistinct animal on pl. 92.1; the basal wreath is on pl. 94.35. c. AD 125–55; burnt (Well 4, contexts 784, 1168, 3946, 3947, 3952–3956, 3968, 3983, 3988, 3990, 3993 & 3999–4002).

5. Drag 37 (Diam. 17cm), with a mould-stamp of Albucius ii of Lezoux within the decoration (stamps report no. 12). The stamp, ovolo, Venus, kneeling cupid, latticed column, border and terminals are all on Stanfield and Simpson 1958, pl. 121.16, the leaf and beaded ring on pl. 120.5. The seated cupid is Oswald 1936–7, type 443. c. AD 145–75; burnt (Well 4, contexts 621, 765, 1157, 1168, 1186, 3943, 3945, 3950, 3960, 3963, 3964, 3966, 3972, 3974, 3985, 3996 & 4004).



Figure 3.13. Decorated samian (I).

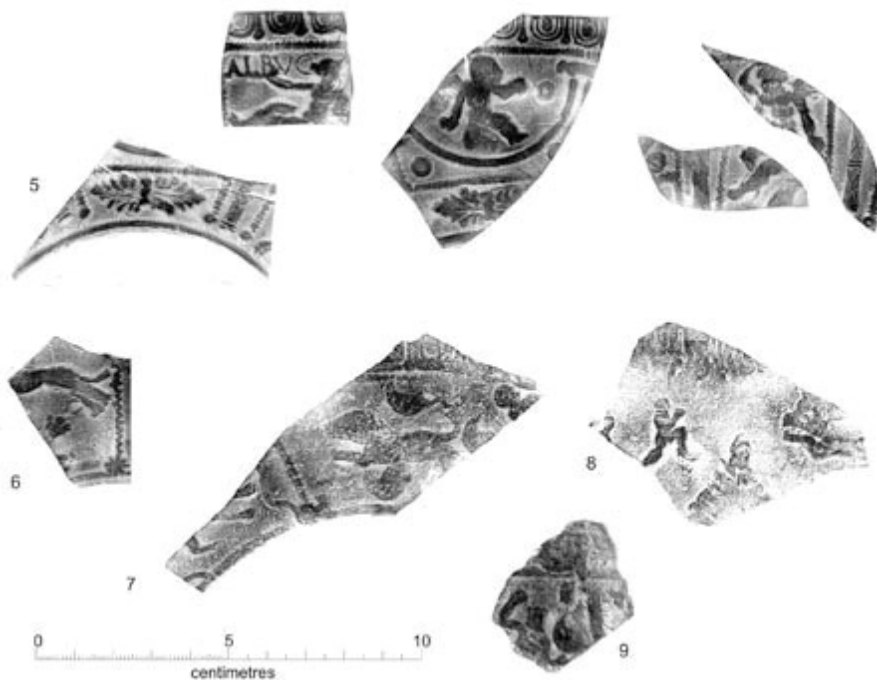


Figure 3.14. Decorated samian (II).

6. Drag 37, Lavoye or Avocourt. The wavy-line border and large rosette were used by Tribunus ii (Oswald 1945, figs. 8.15 & 8.24), the large rosette by Tocca (fig. 9.43) and the large rosette and the ornamental cross motif by Germanus iii (figs. 7.9–10). The hound is Ricken 1934, Taf. 12, type 47; the other animal is not identifiable. c. AD 150–200 (context 699).

7. Drag 37 in the style of Germanus iii of Lavoye. The ovolo is probably that on Oswald 1945, fig. 7.8, which also has the curved leaf; the leaf and a longer added tendril are on fig. 7.5. A similar but smaller lion is on fig 7.8, and the beadrow on fig. 7.14. The terminal is probably a small roundel (fig. 6, xviii); the other animal is not identifiable. c. AD 160–200 (context 596).

8. Drag 37 in the style of Germanus iii of Lavoye. The ovolo and guideline are on Oswald 1945, fig. 7.12, the curved leaf on fig. 7.5. The border is probably that on fig. 7.3; the figure is not clearly identifiable. c. AD 160–200 (context 590).

9. Drag 37, Trier. The ovolo has been almost removed in finishing; the motifs are a male figure (cf. Fölzer 1913, type 506), a leaf (cf. type 772), and perhaps a stag. A date in the second quarter of the third century is likely.

***Mortaria* Kay Hartley**

A total of 530 sherds of mortaria were recorded (see [Fig. 3.34](#) for distribution). The majority (N=434) were recorded by the MPX team, and were assigned their own fabric codes ([Table 3.5](#)). Unfortunately, the associated detailed fabric descriptions for these codings were not located within the archive, so their precise descriptions must be inferred from comparable assemblages. The breakdown of sherds within the fabric groups is shown in [Table 3.5](#). A further subset of sherds (N=96) was sent directly to the specialist, Kay Hartley, without having been catalogued by MPX. Of these, 51 appear to have been oxidised local examples (i.e. presumably PRE1 or PRE2), and of the remainder, 11 were red or Much Hadham colour

coats. The rest were not described.

Analysis of the distribution of sherds over the site suggests that mortaria were being produced at Mucking: a small number of sherds of grey ware mortaria were found in Kilns 2, 3 and 4, alongside other kiln products. Eighteen sherds were recovered from Well 4, only one of which was recorded as burnt, but the predominant Colchester fabrics accord with the date of other material deposited within it. This is also true for the small numbers of sherds found within Wells 2, 6, 7 and 8. A total of 46 sherds of mortaria were recorded from *Grubenhäuser*: as well as some (presumably residual or curated) Colchester fabrics, these mainly comprised Oxfordshire wares (ROX, OXOB & OXCM), the majority of which were dated to the later third or fourth centuries. Indeed, these fabrics, as well as the sherds of Nene Valley mortaria, generally follow the pattern seen in the rest of the Romano-British pottery (see [Chap. 5](#)), with deposition in feature fills associated with Anglo-Saxon material, i.e. the upper fills of the Romano-British enclosure ditches.

Table 3.5. Mortaria by fabric group.

Fabric	Description	Sherd count
MANC	Mancetter	1
	Hartshill	
ROX	Oxford orange, brown with red brown slip	52
OXCM	Oxford cream	97
OXOB	Oxford orange, brown with	50

	cream white slip	
VERU	Verulamium	7
GER	German	3
LG	Lower Germany	4
LNV	Lower Nene	18
	Valley	
COL1	Colchester 1	36
COL2	Colchester 2	16
COL3	Colchester 3	106
PRE1	Provisionally	3
	Essex 1	
PRE2	Provisionally	2
	Essex 2	
GRY1	Greyware 1	22
GRY2	Greyware 2	2
BLA1	Shell-tempered	1
BLA3	Sandy Belgic with	1
	sparse shell	
MHA	Much Hadham A	3
Other	Various	10

Catalogue of Stamped Mortaria and Other Selected Sherds (Fig. 3.15)

1. Dubitatus: cat no. 5492 (302N/628E); 299N/627E is a joining sherd. A mortarium with a stamp of Dubitatus surviving. Colchester within period AD 130–70, optimum date AD 140–60 (see Symonds & Wade 1999, 200, S39–42 for further comments).

2. Marinus: (942N/779E). A flange fragment in VRW fabric. There is a fragmentary stamp of Marinus from his two-line die (see Castle 1976, fig. 8, MS 65 for a complete example). Brockley Hill, Middlesex, optimum date AD 80–110 (see Hartley 2004, 110–11 for further details).

3. Trademark. Cat no. 5183 (1273N/734E): 230g. Diam. c. 360mm, 14%, three joining sherds. Fabric: orange-brown with slightly bluish, grey core; only traces of cream slip survive and

the surface is slightly powdery. Inclusions: frequent, sand-sized, opaque black with rare red-brown material. The inclusions could be indigenous to the clay. Trituration grit: white with some transparent, quartz, with smaller, opaque black, probably of the same material as the inclusions. One of the potter's stamps survives.

4. Trademark: (882N/552E): 135g. Diam. 330mm, 15%. Fabric: orange-brown with wide, well-defined, drab, grey-brown core; some cream slip survives though most has gone. Inclusions: packed with vari-sized, but mostly sand-sized, opaque black material with few larger quartz. Trituration grit: few surviving, quartz and opaque black. The inside surface is partially obscured by accretion. The crazing of the inside surface and underneath the flange could indicate a waster. There is a partial impression of a stamp from the same die as No. 3. Possibly a Mucking product.

Numbers 3 and 4 are small rectangular stamps with a central 'diamond' with three chevrons to either side of it and with narrow borders above and below the motifs; neither end survives in entirety. No. 4 is clear enough to show a cross inside the central diamond. There is one other stamp known on a similar rim, which must surely be by the same potter. This was found at Chelmsford (CF20 202) in a *mansio* context, interpreted as 'dumping after the baths main construction'; it is in a small group of pottery ranging in date from the Hadrianic period up to the end of the second century (pers. comm. Colin Wallace 1988; this stamp was, at the time, mistakenly believed to be from Much Hadham). This is unfortunately fragmentary, but it is clear and it differs from the Mucking stamps in having only a horizontal line across the central diamond. The upper and lower borders appear marginally wider too, but borders are often not clearly impressed. Our No. 3 and the Chelmsford stamp show some slight indication of occasional diagonal bars in the upper border; only further examples can clarify this. All the mortaria involved are similar in rim-form and fabric. Small differences in dies which were otherwise identical could result either from some alteration in the die at some point in its life by accident or through some later trimming of the die; or, because the potter had made more than one die originally. The design of the stamps is unique, all are associated with similar fabric and rim-profiles, leaving no doubt that all are from the same workshop.

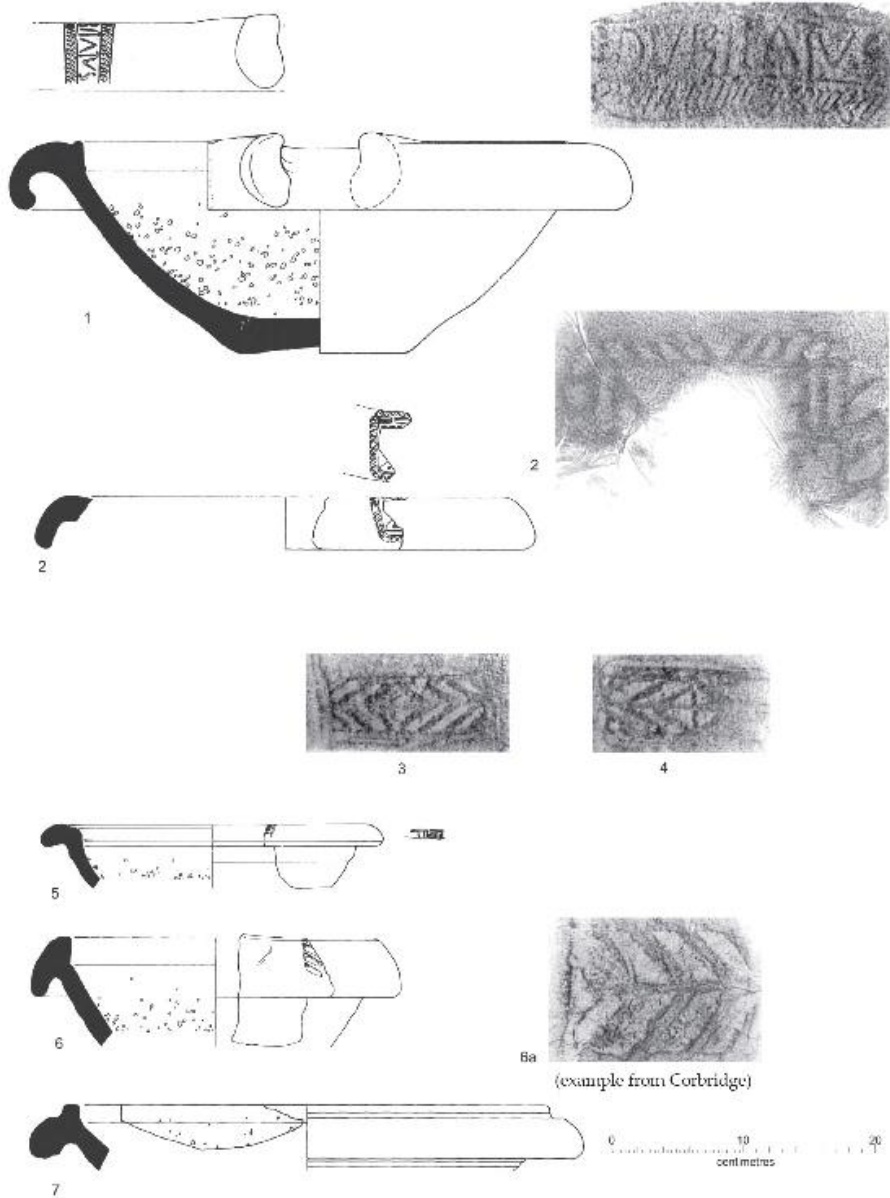


Figure 3.15. Mortaria.

The rim-profiles used are composed of two parts, a small, rounded, down-curved flange with a high bead. These forms came into use in East Anglia and adjacent areas before the practice of stamping ceased and continued afterwards into the third century. At Colchester this basic form is associated with Kiln 32 (Hull 1963b, fig 98, nos. 5 and 6;

it appears at Ellingham, (Hartley & Gurney 1997, fig. 9, no.7F1); similarly in mortaria from kiln 918 at Postwick, Norfolk (Bates 2003, fig 28). These, together with some wallsided forms, were clearly among the latest to be stamped at workshops in East Anglia; both forms continued to be made after the practice of stamping ceased. The date when stamping finally ceased in East Anglia was sometime in the period AD180–200.

Numbers 3 and 4 are likely to have been produced at Mucking. The small number present together with the very limited distribution is entirely in keeping with the general picture throughout East Anglia e.g. Snettisham and Hevingham (unpublished). Worth special mention in this context is the little workshop at Grays, Essex (Rodwell 1983, 22–24) where they were producing mortaria of both the wallsided and the small flanged type present at Mucking. All had herringbone stamps from one die and no other stamps from that die have been recorded elsewhere. Apart from a few larger producers like those at Colchester and Brampton, there was a myriad of small workshops in East Anglia in the second and early third centuries (Hartley and Tomber 2006, p.82; Swan 1984, *Gazetteer*, Essex (now online)).

There are several sherds from other mortaria in the same fabric with comparable profiles and the form carried on into the first half of the third century. There are some that are undoubtedly third-century. Mortaria which seem related (no stamps) like Cat. no. 5223 (and somewhat later examples like Cat no. 5520 which may also be Mucking products) are listed below.

5. (836N/711E, Level 5). Fabric: hard, cream of the type produced most commonly at Colchester, but also in small workshops throughout East Anglia (Tomber & Dore 1998, 133–4). These fabrics are basically very similar and rarely distinguishable in macroscopic examination. The broken stamp is probably a herringbone stamp rather than the border of a namestamp; it is unfortunately too fragmentary and too undistinguished to be identified. Although it is not impossible, there is no evidence for this unusual rim-profile being produced at Colchester and it should probably be attributed to a workshop somewhere in Essex in the midsecond century.

6. Hartley No. 82: 110g. Fabric: hard, fine-textured, pale brown with some light grey in the core. Inclusions: fairly frequent, small to medium, quartz and some opaque black material. Trituration grit: mostly obscured by accretion, but included white quartz. The broken, right-facing stamp is of herringbone type and is unusual in having very large chevrons. Only one other example is known from the same die, from Corbridge (Birley & Gillam 1948, fig. 1, 5vi, wrongly attributed to the

potter BDT who worked at Corbridge). The rim-profile of the Mucking example is something between Hull 1963b, fig. 87, nos. 4 and 13. Its optimum date is AD 160–200. The herringbone is of an unusual type; this, together with the fabric and the presence of a stamp at Corbridge, points to production in one of the workshops in Kent or East Anglia, but there is no reason to associate it with Kent or Colchester (the fabric and the type of herringbone are against production there). Large numbers of mortaria with herringbone stamps were exported up the coast to the Tyne and the Forth (Hull 1963b, 114–15 and fig. 20; Hartley 1999, 205, 209); most were from the Colchester workshops, but a substantial minority were from at least one workshop in Kent (?at Canterbury) and very occasional ones were from other sites in East Anglia (e.g. Brampton, Norfolk, Rae & Rae 1974, 208, and fig. 20, no. 3). The fabric of both the Mucking and Corbridge mortaria fit with production at Mucking, and given the system of delivery by coastal traffic, there is no reason why the occasional item could not have travelled north.

Other Selected Mortaria

7. Cat. No. 5508: 295g. Diam. 430mm, 14%. Fabric: very hard, fine-textured, orange-brown; self-coloured or with selfcoloured slip. Inclusions: fairly frequent, vari-sized, quartz with a few red-brown and black material. Trituration grit: quartz. The exact source and date are unknown. There is a generally similar one from Pit 149 at Richborough (unpublished), but the pit, dated AD 80–100 by Bushe-Fox, contained later intrusive pieces at the top (Bushe-Fox 1949, 98).

This is certainly an import which has to have been imported from Lower Germany or from Gaul. Two periods are known for major imports of mortaria from Lower Germany. The first, likely to stretch from the Claudian to the mid-Flavian period, included mortaria made in the Eifel region, but was probably mainly concerned with mortaria made at Lyons and imported via the Rhone. The second period dated from c. AD 150 until the mid third century or later. These were mortaria made at Soller, Kr. Düren (Haupt 1984) and at other sites in the Rhineland and in adjoining parts of Gallia Belgica and exported via the Rhine. The major period of imports from Gaul was from the Claudian to the Antonine period. This example belongs to a small number of imports which do not fit readily into either group.

Not illustrated: Cat. No. 5526, one Oxford cream body sherd and one indeterminate body sherd. Also one fragment from the collar of a mortarium of the same type as Haupt 1984, Taf. 183, no. 4. This

mortarium can be attributed to the pottery at Soller, Kr. Düren. The products of this pottery were not being imported into Britain before c. AD 150; collared mortaria of this type were certainly being imported well into the third century and the date for the end of the production is unknown. The fabric of this example appears identical to that used by Verecundus 2 (Tomber & Dore 1998, 79–80). Burnt along the bead.

***Amphorae* David Williams**

The amphorae assemblage consists of 1129 sherds, many of which are fairly small and some of which have been adversely affected by burial conditions (Table 3.6; see Fig. 3.34 for distribution).¹⁰ The overwhelming majority of sherds, some 90%, belong to two types commonly found in Roman Britain, the flat-bottomed Gauloise series of wine amphorae, probably mostly represented here by Gauloise 4, the most commonly made form of the Gauloise series (Laubenheimer 1985; Peacock & Williams 1986, class 27) and the Spanish olive-oil globular amphora Dressel 20 (Williams & Peacock 1983; Peacock & Williams 1986, class 25). These figures should be put into some kind of perspective since Dressel 20 were large, thick-walled vessels and the Gauloise series were much smaller and thinner-walled. The other amphorae sherds include a likely handle from the late republican form Dressel 1 which, if correctly identified, suggests a pre-Conquest date. It is also possible that there may be a few more Dressel 1 sherds present although, because of fabric similarities, it is difficult to be sure that they belong to this form and not to the later bifid-handled Dressel 2–4 type. One handle and a plain bodysherd come from the cylindrical North African series, which carried a

variety of contents (Bonifay 2004) and probably belong to the later Roman occupation of the site. There are also a few sherds of southern Spanish amphorae present.

Table 3.6. Amphorae by type.

	Count	Percentage
Dressel 1/Dressel 2-4	4	0.4%
Dressel 20	455	40.3%
Gallic	561	49.6%
Southern Spanish	12	1.1%
North African	2	0.2%
Undesignated	95	8.4%
TOTAL	1129	

Gallic amphorae sherds are particularly common at Mucking, by count exceeding Dressel 20 by over one hundred. These are mostly represented by bodysherds, but also present are eight rims, four handles and two bases. The most common type present is undoubtedly Gauloise 4, and six of the rims would all seem to belong broadly to this form. Gauloise 4 is a flat-bottomed wine amphora predominantly made in southern France, more particularly around the mouth of the Rhone in Languedoc, where a number of kilns are known (Laubenheimer 1985; Williams & Keay 2006). This type was imported to Britain from shortly after the Boudiccan revolt to at least the late third century AD. If Peacock is right in suggesting that supplies of this amphora may have arrived in Britain via the Rhine to London or the south-east coast, it might explain their apparent frequency at Mucking, which would not have been far from one of the major distribution points for Gaulish wine in Roman Britain (Peacock 1978). The only other recognisable type of Gallic amphora at Mucking is represented by two rims of Gauloise 1 form, possibly from the same vessel. Like Gauloise 4, this is also a flat-bottomed type, but with a fairly thick, slightly convex expanded collar-rim rather than the rounded rim associated with the former type (Laubenheimer 1985; Peacock & Williams 1986, class 28; Williams & Keay 2006). This form was predominantly made in *Gallia Narbonensis*, essentially the lower Rhône Valley, and the date range is first to third century AD (*ibid.*). It is found mainly in France, particularly along the Rhône valley, but is

also possibly present in London (Green 1980, fig. 21, nos. 38 and 39), and has been seen by the writer at Worcester and Malton in Yorkshire. Wine is again thought to have been carried in these vessels.

Dressel 20 amphorae were the export containers for the huge surplus of olive oil produced by the many estates situated in the valley of the River Guadalquivir and its tributaries between Seville and Cordoba in the southern Spanish Roman province of *Baetica* (Ponsich 1974, 1979). While Dressel 20 bodysherds can prove difficult to date within the long production period of this form, rims provided a useful dating source, since they can be seen to evolve over the period of their production. Eight Dressel 20 rims were recovered from Mucking and can be approximately dated from parallels in Martin-Kilcher's scheme for the development of the Dressel 20 rim, based on well-dated examples from the Swiss forts of August and Kaiseraugst (1987). This suggests that the majority of the Mucking rims date from the second half of the first century AD to the middle of the second century AD, with two rims dating as early as the first 30 years following the Conquest. A stamped handle probably belongs to the second half of the second century AD. It is difficult to give any kind of approximate date to the remaining Dressel 20 sherds, as the form had such a long life, from the reign of Claudius until shortly after the middle of the third century AD (Rodriguez-Almeida 1989). The Augustan prototype of Dressel 20, Oberaden 83, is known from pre-Roman levels at Prae Wood and Gatesbury Track, so that importation of Baetican olive oil into Britain may well have begun as late as the last decade of the first century BC (Williams & Peacock 1983). Four basal knobs were also recovered, and 20 handles, only one of which is stamped (from Ditch A1A). The stampI T] is separated by triangular stops, including one before the I, suggesting one or more preceeding further letters. In fact, the missing letter is most probably L, making the stamp L. I T. This stamp has been found at a number of sites in Britain and is generally dated to the second half of the second century AD (Callender, 1965, 878; Carreras & Funari 1998, 259).

A number of undistinguished bodysherds in the typical gritty Dressel 20 fabric are fairly thin-walled, and it is possible that some or all of these belong instead to Haltern 70, which tituli picti suggest carried *defrutum*, a sweet liquid obtained by boiling down the must, or olives in *defructum* or *muria* (Peacock & Williams 1986, class 15; Carreras 2003; Williams & Keay 2006). This amphora type was made at a number of production centres, including some in the Guadalquivir Valley, and so shares a similar fabric to the more commonly known Dressel 20 (*ibid.*).

The 12 bodysherds of southern Spanish amphorae present derive

from the coastal regions of southern Spain, between Cadiz and Malaga, and were most probably used to carry fish-based products (Peacock 1974; Peacock & Williams 1986, classes 16–19). As a class, they can generally be dated from the late first century BC to the second century AD.

Dressel 1 are predominantly wine-carrying amphorae that were made primarily in the Campanian, Latium and Etruria districts of Italy (Peacock and Williams 1986, classes 3 & 4; Williams & Keay 2006). The 1A form was produced from about 130 BC till around the middle of the first century BC, while the 1B form was made from around the turn of the first century BC until the last decade of the century (Tchernia 1986). Fairly large numbers of Dressel 1A have been recovered from Hengistbury Head in Dorset, while the majority of Dressel 1B vessels are found north of the Thames (Peacock 1984). It is clear, however, that the 1A form did occasionally reach the latter region, as a 1A rim from Gatesbury Track demonstrates (Williams & Peacock 1979). By and large though, this two-fold division of the Dressel 1 distribution in Britain appears to be valid (*cf.* Peacock 1984). The small piece of oval handle from Pit 1157N/237E appears to be from a Dressel 1 vessel. A thin section of the sherd reveals a volcanic assemblage of minerals and rocks similar to those of other amphorae of this form (Peacock and Williams 1986, 87). If this is correctly identified, it suggests a pre-Conquest date. Apart from the Dressel 1 handle, there are a number of featureless bodysherds from the site that may also belong to this form, and for which thin sectioning suggests an Italian origin. However, it is difficult to be precise because similar fabrics were used for the later Dressel 2–4 form, which is the direct successor on Italian kiln sites to Dressel 1 amphorae (Peacock 1977a; Peacock & Williams 1986, class 10). It is possible, therefore, that these bodysherds belong instead to the Dressel 2–4 form, which was in production from about the mid first century BC (Tchernia 1986).

Two sherds, not seen by the writer, have previously been identified by David Peacock as belonging to cylindrical amphorae of North African origin (1977b, 271–2). Unfortunately, it is not possible to say to which of the North African cylindrical series the Mucking sherds belong to, as a range of different forms were exported to Britain (Williams & Carreras 1995). One sherd, a handle, comes from a late ditch, while a bodysherd was recovered from the fill of a ‘fourth-century AD well, sealed by a fifth-century *Grubenhaus*’ (*ibid.*), Well 1 (Jones & Rodwell 1973, 38, now dated earlier). North African cylindrical amphorae started arriving in Britain in small numbers during the Hadrianic–Antonine period and importation may have continued as long as the fifth century AD (Williams & Carreras 1995).

These vessels are generally considered to have transported olive oil, though it is now thought that fish products also formed a large part of the contents carried (Bonifay 2004).

Romano-British Pottery Rosemary Jefferies and Sam Lucy

From the start, recording of Romano-British pottery at Mucking was designed to be computer-based. A 'question source file' (QSF) was designed to structure the data input, and sherds were input by fabric group (though some sherds had already been extracted and sent to specialists, for example the samian, amphorae and mortaria). The QSF was extremely comprehensive, designed to record all contextual data, fabric, form, details of treatment and decoration, plus key measurements (but not weight). A sample box of identified fabrics was maintained to help in fabric identification. Details of the Mucking fabric and form series are given below. Imported products were classified according to typologies in current use in the early 1980s, and these have not generally been updated to reflect more recent work, although this is drawn on in the discussion of Mucking's pottery below. Distinguishing pre-Conquest material from post-Conquest material is not straightforward. Margaret Jones (1982) stated that, "apart from 'Belgic' products, the final IA pottery at Mucking is shellgritted, hand-made and wheel-thrown. This was fired in purpose-made clay-lined kilns and production carries on into the Roman period". Even some of the more identifiable 'Roman' forms appear to have occasional handmade examples, and some of the wheelthrown forms are now known to be Late Iron Age/Conquest Period in date.

Interpreting Mucking's Romano-British pottery sequence is made more problematic by the fact that not all the pottery was catalogued. The contents of a small number of the 800 boxes transferred to the British Museum in 1985 were never catalogued. From scanning the boxes themselves, this material seems largely to derive from surface clearing, and from smaller features such as a number of postholes; omission of this material from the database is not thought to have affected the interpretation of the pottery assemblage. The most glaring omission is the pottery from RB Kilns 2a and 2b; the decision seems to have been taken that as these kilns and their products had already been summarily published (Jones & Rodwell 1973), such computer cataloguing was not necessary.

The Mucking Fabric Series

The Mucking Fabric Series classification is hierarchical in character and was largely based on subjective, or arbitrary, definitions. These fabric divisions should not be taken as a definite indicator of date range or production centre. The Fabric Series was established at a time when little work had been carried out on pottery production in the Thames Estuary, before the appearance of a number of key ceramic reports and typologies. However, this is in no way a criticism of the Fabric Series as established at the time (the same fabric series was used in part at North Shoebury; see Leary 1995).

There is a danger that fabric is considered to represent a progression in time and an indicator of discrete groups; for example, BL fabric was perceived to be representative of the late pre-Roman Iron Age and the Early Roman period. Whilst this is generally true, it should not be overlooked that vessel function and local clay sources with naturally occurring inclusions dictate the fabric used (Shepard 1980, 161). One must remember that there may be difficulties in distinguishing between natural inclusions and accidental or deliberate addition of tempering material. In the Thames Estuary, the local clays contain a diverse range of naturally occurring inclusions, from fine-grained sand to coarsegrained sand. Clearly consistency in the quantity and

material used as temper would indicate whether or not it is naturally occurring.

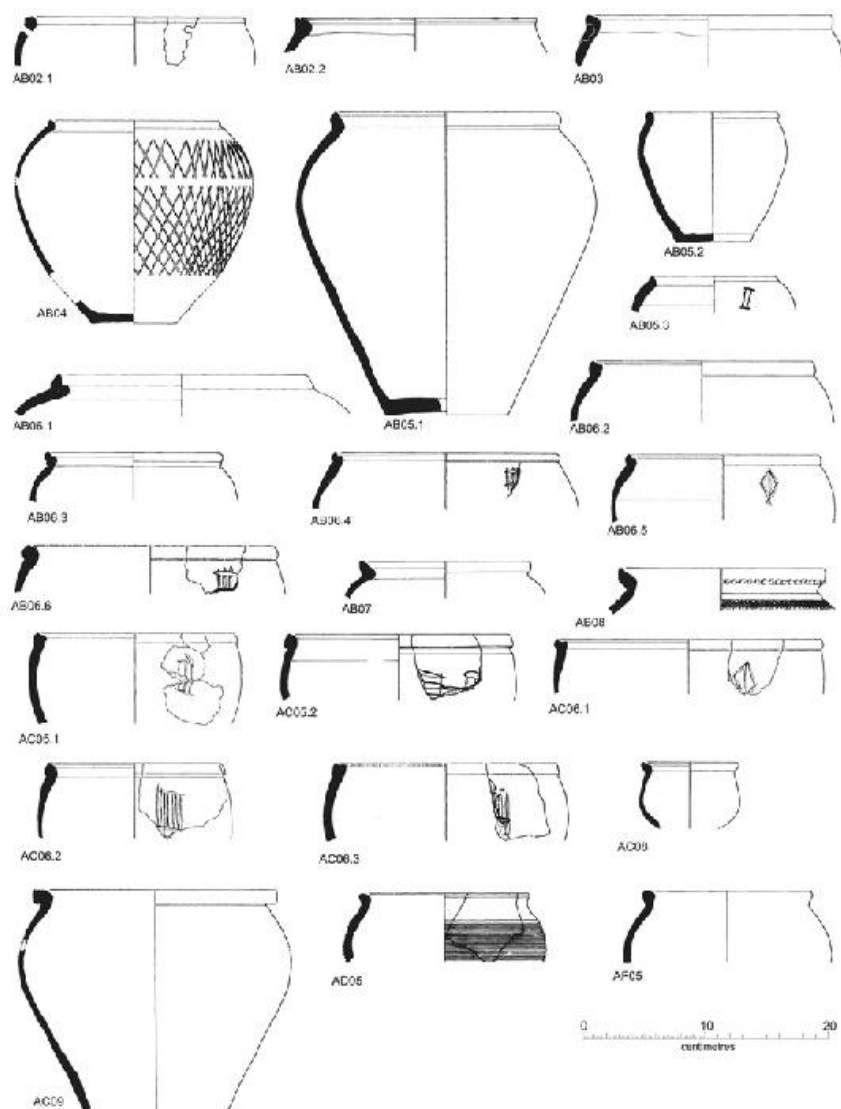


Figure 3.16. Pottery type series: A forms.

In the fabric descriptions inclusion size is defined as follows:

Fine	< 0.1mm
Medium	0.1–0.25mm

Coarse 0.25–2mm

Very coarse 2–5mm

The BL fabric group has been subdivided into a number of fabric groups. These groups may be indicative of limited availability of material, rather than a deliberate choice. The divisions within the FL fabric group appear to indicate a deliberate choice of temper, as do those in the GF, GV and GRY fabrics. In each case, the subdivisions relate to specific forms. It was noted by R. Pollard on a visit to MPX in 1980 that shell-tempering west of the Medway in the first century AD coincided with grog-tempering. There was also some confusion over the term ‘temper’ in this context; Pollard maintained that the shell was natural temper, and not deliberately added.

Ruth Leary reports that the database was largely compiled when she was an inexperienced pottery researcher. The procedure followed was that Leary studied and identified the sherds bag by bag and wrote those identifications on the (paper) bags. Volunteer and part-time helpers with no archaeological experience then input this data in pairs, one typing while the other checked the input. Although errors may be due to difficulties in reading the codes and inputting correctly, she would like it recorded that most errors will be due to her inexperience at the time. The large number of ‘Belgic’ fabrics are undoubtedly the result of their variety: this meant ‘splitting’ rather than ‘lumping’ them, with the intention that these could be recombined as their nature became clearer. The same general attitude resulted in the, at times, awkward placement of type within the type series. It was always intended that some types in the working type series might be moved to another form group, but this never happened. No dating was recorded during the cataloguing phase as it was hoped that the stratigraphic sequence at Mucking would help date the pottery, particularly that made on site. The dating given below is supplied by Rosemary Jefferies.

The Mucking Fabric Series was intended to include all fabrics occurring at Mucking, and not just the kiln products. The original fabric series is presented here as an ‘archival’ document (the only extant copy was provided by Ruth Leary, but it had deteriorated in storage, and some of its text could no longer be read). It is followed by an expanded version, which is brought up to date with current referencing following the presentation of the type series.

TR_{AND} TN F_{ABRICS}

TRA Red-orange surface, often grey core. Smooth, slightly soapy. Fairly soft, finely irregular fracture. Medium-fine mod sand; mediumfine moderate black/brown/red iron oxides;

medium-fine moderate grog; fine moderate– sparse mica. TRB Red-orange with grey core. Smooth. Hard, irregular fracture. Medium moderate sand; medium fairly sparse red/brown/black iron oxides (?some grog); fairly sparse medium small white inclusions; moderate-sparse fine mica. Early local ware ?coarser version of above.

TRC Orange with grey core. Smooth. Hard, finely irregular fracture. Fine moderate sand; fine sparse iron oxides. V. Rigby suggests this group is late (third–fourth-century) TR copies.

TNA Black surface, pale grey paste. Smooth. Fairly hard, finely irregular fracture. Very fine sand. Real TN identified by V. Rigby.

TNB Black surface, pale grey paste. Smooth, fairly soft, finely irregular fracture. Very fine moderate to sparse sand; very fine sparse grog; very fine sparse black iron oxides. V. Rigby identified as ?Colchester but possible import.

MG Orange. Slightly rough with mica rich coat. Fairly soft, irregular fracture. Moderate ill sorted sand; sparse medium iron oxides; moderate fine mica.

GB1 Pink/buff/white. Smooth. Soft, finely irregular fracture. Moderate fine sand. Sparse fine red/black iron oxides. V. Rigby commented imported or ?Colchester.

FLAGON FABRICS

FLA Orange with cream slip group.

FLA1 Orange, fairly hard, smooth feel, laminar fracture often sandwich. Moderate fine to very fine sand; sparse fine mica; sparse fine iron oxides. Sometimes has grog/clay pellets ?like LNA1. Cream slip. Probably “Upchurch” product.

FLA2 Orange, fairly hard, irregular fracture, rough feel, cream slip. Moderate mediumfine sand; sparse fine mica; sparse fine brown oxides; sparse–moderate white inclusions ?lime-rich clay. Proportions of sand and white inclusions vary but subdivisions did not emerge from microscopic examination. ? Upchurch related/Hoo.

FLA3 Orange-grey with cream slip. ?Mucking or Palmers. Hard, finely irregular fracture, sandy feel. Moderate-abundant fairly fine sand; moderate fine black iron oxides; sparse medium red inclusions; moderate fine mica.

FLA4 Red (similar ‘cherry’ red to MHB). Fairly hard, smooth, finely irregular fracture. Cream slip often with grey core. Moderate– abundant fine sand; sparse fine mica; sparse fine red/brown iron oxides. Very similar to FLA3 except for colour.

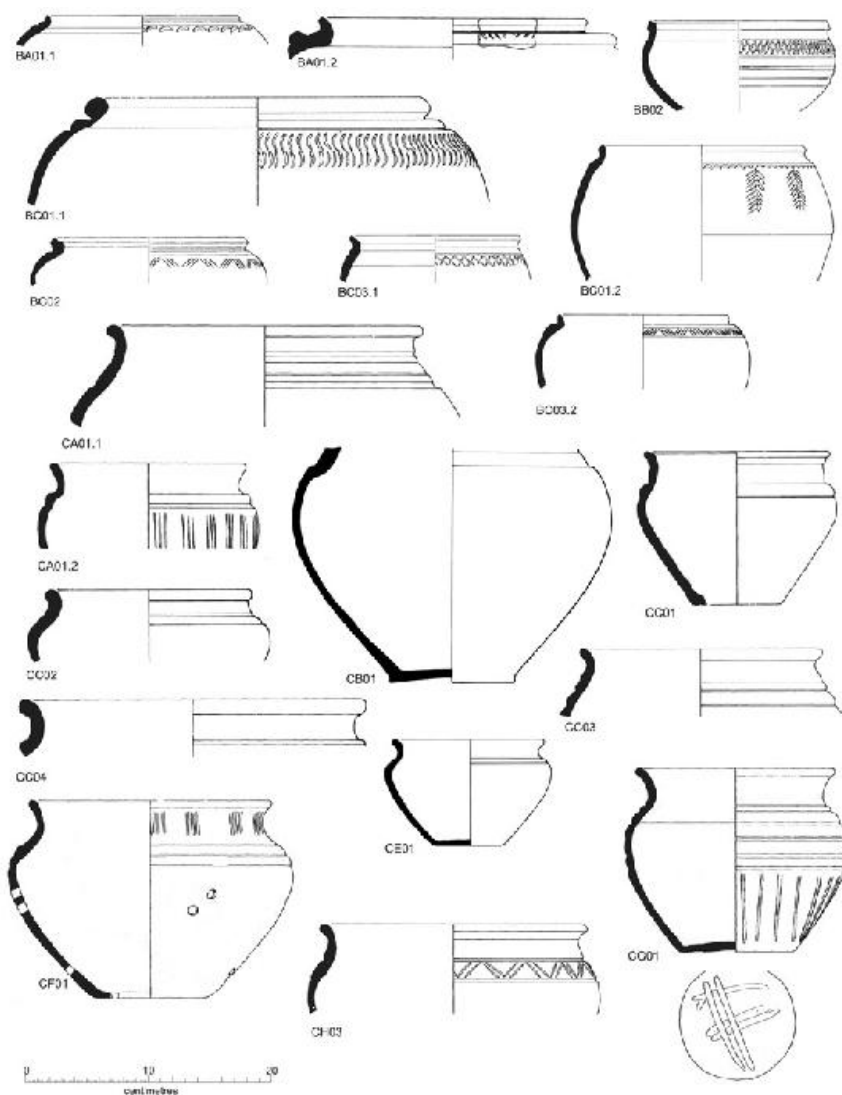
FLA5 Orange with cream slip. Fairly hard, rough feel, irregular

fracture. Moderate to abundant medium sand; sparse medium red/ brown iron oxides.

FLA6 As for FLA3 but no cream slip: worn off or never slipped?

FLA7 Orange with cream slip. Fairly hard, rough, irregular fracture. Moderate medium sand; moderate medium ?chalk; sparse medium flint.

FLB Pipeclay white/off-white, occasional grey core. Hard, smooth feel and fracture. Sparse fine sand; sparse fine brown iron oxides; sparse fine mica.



FLC Buff sandy flagon fabric group. Probably all Colchester products.

FLC1 Dirty buff-yellow. Hard but often powdery due to soil conditions. Sandy feel, finely irregular fracture. Sparse medium sand; moderate medium soft white inclusions ?chalk; sparse fine mica.

FLC2 Pinkish-orange. Fairly soft, smooth feel, irregular fracture. Sparse medium sand; moderate fine red/black iron oxides; moderate fine sand; moderate fine mica; moderate fine chalk. Sometimes vesicles on surface ?dissolved chalk. Similar fabric to mortaria COL1 variant.

FLC3 Creamy buff, occasionally pink. Soft, powdery, smooth, very clean break and matrix. Sparse medium chalk; sparse fine sand; sparse fine black iron oxides; sparse medium red inclusions, earthy looking. Similar to mortaria COL1.

FLC4 Buff-orange. Hard, slightly rough, irregular fracture. Sparse-moderate medium quartz with background of finer quartz and black iron oxides; sparse medium red ?sandstone; sparse medium chalk.

FLC5 Buff-cream. Fairly hard, sandy feel, irregular fracture. Sparse medium sand; moderate-abundant fine sand; sparse fine chalk; moderate fine iron oxides; moderate fine mica. Similar to FLC2. Also similar to mortaria COL3.

MUCKING FABRICS

GRY Grey ware with no slip. Petrological and heavy mineral analysis by D. Williams.

GRYS As above with slip.

GFN Fine sandy grey ware.

GFNS As above with slip.

BBT2 "BB" type following Farrar 1973, 78-9.

GVC Grey-brown. Hard, rough, irregular fracture. Moderate medium oxides; moderate fairly fine sand; moderate coarse grog.

GVC2 Grey-brown. Very hard, rough, irregular fracture. Moderate very coarse grog; abundant coarse sand; moderate medium black and brown oxides; moderate long black inclusions ?burnt out oxides; moderate coarse flint. Similar to coarse mortaria BLA3, but BLA3 lacks coarse grog. Also similar to BLB5 but rougher and sandier.

GVC3 Grey. Very hard, rough, irregular fracture. Abundant coarse sand; abundant coarse flint.

NSP Brown-orange-grey. Fairly hard. Smooth, irregular fracture. Moderate medium sand; moderate fine oxides. Sub-group of GRY/BBT2 which lacks characteristics of these specific groups but otherwise similar. Undiagnostic sandy fabric.

NSPS As above with slip.

BLA Fabric group characterised by the presence of shell-tempering and fairly coarse sand. The BLA3 subgroup is transitional to grey wares and similar to the GRY of FA01 jars.

BLA1 Brown-orange-grey. Hard but often friable; irregular fracture. Moderate–abundant platey vesicles on shell; varying medium sand content; sparse flint. Further subdivision does not seem justifiable.

BLA2 As above with moderate medium grog.

BLA3 Brown-orange-dark brown-grey. Hard. Rough, irregular fracture. Moderate medium coarse sand; sparse ‘plate vesicles’ shell; sparse coarse flint; sparse medium oxides.

BLA4 As BLA3 with medium grog, usually red. Similar to the touch with more sand inclusions.

BLB Sand and grog-tempered group, corresponding to ‘Belgic’ proper.

BLB1 Black-brown-grey surfaces with red/brown margins. Includes sub-group with grey surfaces and margins and light grey core. Fairly hard. Smooth. Finely irregular fracture. Moderate–abundant medium-fine well sorted sand. Sparse–moderate fine black oxides; sparse fine grog; moderate–abundant fine mica. Some BLB1 jars are a slightly different fabric from the BLB1 cups, platters and beakers and it may have been useful to divide them. For area ‘B’ ditches, the jars in question were input as ?BLB1. The main difference is the matrix which is not as fine, more laminar in appearance with coarser oxides and grog than BLB1 cups which display a very well sorted matrix with abundant fine sand.

BLB2 A large group of medium sand- and grogtempered fabrics which could be sub-divided ad nauseam. Brown-black with brown or grey core and red/brown margins. Hard. Soapy or smooth, though some are rough when unburnished. Irregular fracture. Sparse– medium sand often with a background of very fine sand. Moderate–medium grog multicoloured; moderate fine mica; moderate fine black oxides; sparse small white inclusions ?chalk; sparse fine mica. Differs from BLA4 in colour, sandwich effect, iron oxide

content, properties of sand and usually colour of grog and feel. BLB3 Orange, brown, occasionally grey. Fairly hard. Smooth-soapy feel. Irregular fracture. Abundant-moderate coarse grog; sparse coarse vesicles ?organics; rare iron oxides; sparse-moderate fine sand, usually sparse.

BLB4 Black with brown core. Hard. Smooth. Slightly laminar fracture. Rare fine sand; sparse iron oxides; moderate burnt organics. Thinsectioned by A. Mainman. Very rare fabric, possibly part of the BLB1 variations of the early Roman phase.

BLB5 Colour as BLB2. Very hard and leathery feel. Moderate coarse grog; moderate medium oxides; moderate medium ? chalk ?organics. Similar to BLB3 and GVC2.

BLB6 Black-brown. Hard. Smooth. Irregular fracture. Abundant fine sand; sparse-moderate medium grog; moderate medium grog; moderate medium black oxides; moderate medium small white inclusions ?chalk. Grog very hard to detect; probably black BLB2.

BLC1 Black-brown. Hard, smooth. Irregular fracture. Moderate medium sand; sparse medium black oxide; moderate fine vesicles, round ?chalk.

BLC2 Colour as above. Fairly rough, Irregular fracture. Moderate fine sand. Moderate medium round vesicles or small white inclusions ?chalk; sparse black oxides; sparse-moderate medium grog often grey or brown; sparse- moderate fine mica. Similar to BLB2 but with more visible vesicles or white inclusions and a less fine matrix. It may be better to consider this a subgroup of BLB2, as without long careful microscopic examination, it can be difficult to attribute sherds to one or the other group with certainty.

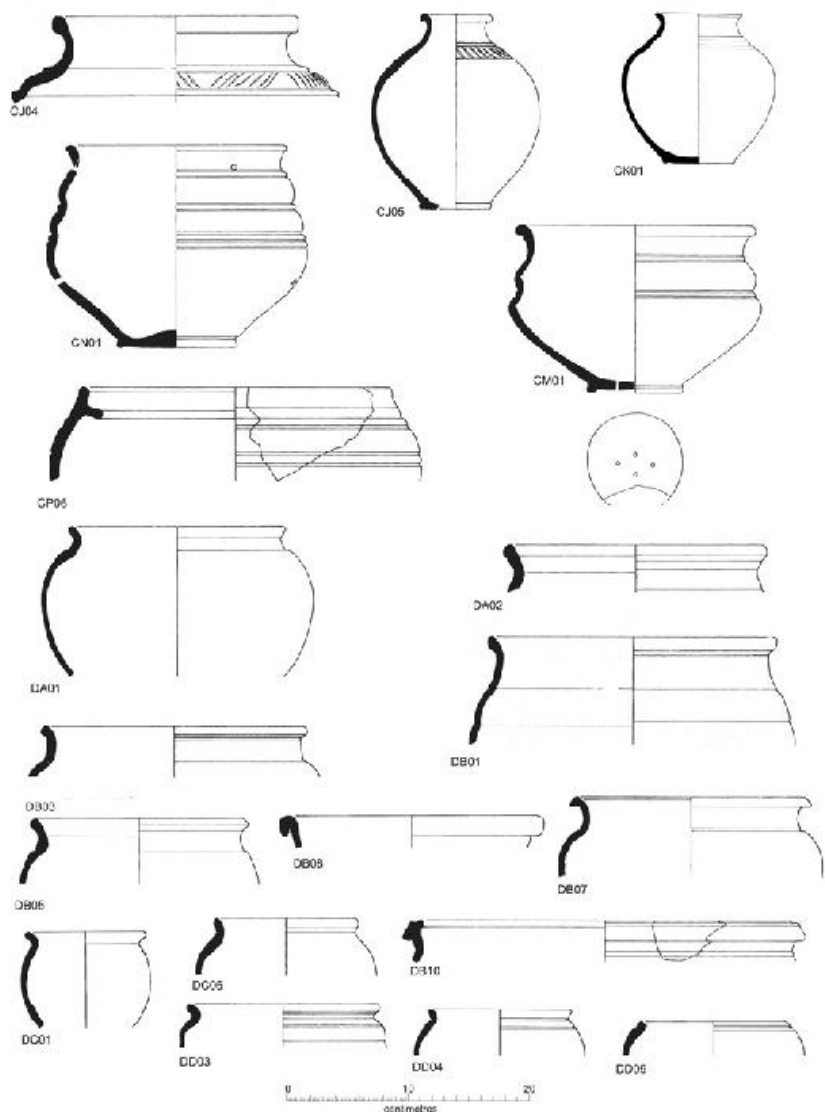


Figure 3.18. Pottery type series: C and D forms.

FG Flint grit with medium red grog. Occasionally with no grog. Abundant coarse sand. Seen in late La Tène features.

NON-MUCKING FABRICS

BH Brockley Hill cream-white. Hard, roughly granular, hackly

fracture. Moderate medium sand; sparse fine iron ores; sparse medium flint.

POD Portchester D. Off-white/grey/pink/yellow. Hard, rough granular, very irregular fracture. Abundant medium sand; sparse fine iron oxides. POD and BH can be confused, but POD tends to be muddier in colour, rougher in feel and has ill sorted sand inclusions and dirtier matrix.

MN Mayen. Volcanic grits. See Williams.

LNA1 London/Upchurch. Black-grey with grey core. Fairly soft, smooth, laminar fracture. Sparse-moderate very fine sand; sparse very fine mica; sparse very fine oxides.

LNA2 As above with fine grog or clay pellets.

LNB1 Orange-pink-buff. Smooth, fairly soft, finely irregular, sometimes laminar fracture. Moderate very fine to fine sand; sparse fine iron oxides; sparse fine mica. Sometimes this group is very similar to TRA and forms are related.

LNB2 As LNB1, but lime-rich. LNB1 is similar to FLA1 and LNB2 to FLA2.

HG Highgate. Grey, silver slip. Hard to very hard, smooth, laminar fracture. Moderate fine-medium sand; sparse oxides; sparse mica. Generally harder and coarser than LNA.

ROX Oxford Red Colour-Coat. Red to red-brown. Fairly hard to soft, slightly rough, finely irregular fracture. Moderate fine sand; moderate fine mica; moderate fine black oxides.

PMT Parchment ware, probably Oxford. White to off-white with pink core. Often painted. Hard, rough, irregular fracture. Moderate medium sand; moderate fine black or red oxides. Dates to mid third century.

MHA Much Hadham Ware. Bright orange. Hard, slightly rough, irregular fracture. Moderate medium-fine sand; moderate medium black iron oxides; sparse fine mica.

MHB Cherry red. Hard, slightly rough, finely irregular fracture. Usually burnished. Moderate medium-fine sand; moderate fine black oxides; moderate fine mica.

NVA Nene Valley. White to off-white. Hard, smooth, irregular fracture. Thick. Moderate medium-fine sand; sparse medium black or red oxides. Black-brown CC sometimes orange.

NVB Pink core with brown CC. As above except colour.

NVC White to off-white. Soft, smooth, finely irregular fracture. Thin. Moderate fine sand; moderate fine black or red oxides; sparse fine mica.

NVD Pink core, sometimes grey with reddish brown CC. As above.

KOLN White with black colour coat. Soft, smooth, very finely

irregular fracture – nearly smooth. Moderate–sparse very fine sand; rare fine red oxides.

CLC Colchester Colour Coat. Orange. Medium soft, slightly rough, finely irregular fracture. Brown colour coat. Abundant fine sand; moderate–sparse fine mica.

EG Dark orange brown-grey sandwich or orange throughout with black or brown colour coat. Abundant fine sand; rare fine mica; ?voids.

MV Moselle Valley type. Orange/grey sandwich with metallic colour coat. Hard, smooth, smooth fracture. Very fine, no visible inclusions.

EGS Eggshell. Black. Highly burnished. Hard, smooth, laminar fracture. Very thin. Sparse very fine sand; sparse very fine iron oxides; sparse very fine small white inclusions ?chalk.

LY Lyon. See Greene 1979 and Anderson 1981.

FRE Buff with greyish core. Fairly hard, smooth, finely irregular fracture. Moderate fine sand; moderate fine black/brown/red oxides; sparse very fine micas.

The Type Series

The Mucking type series was developed as a working framework, at a time when the type series now in standard use had not been published. It was designed to be extendable, and was similar to that used at Southwark (Marsh & Tyers 1978). The classification works on the whole to the part. The primary divisions were made in 25 major classes of forms, which were sub-divided into specific types, e.g. A indicates the major class of jars. The second letter indicates a sub-division, which is further sub-divided by a number that represents a specific rim form. These divisions were mainly based on the shape of the vessel, but distinct or characteristic decoration has also been used, particularly with reference to the sub-divisions.

The usual method is to classify from open to closed forms. However, the Mucking Type Series can be generally described as going from closed to open forms. The divisions within the type series relate to form, not specific dated groups. The main divisions are: A – Neck-less jars; B – Widemouthed jars with high shoulders; C – Cordoned jars; D – Wide-mouthed jars; E – Round-bodied jars; F – Mediumnecked jars; G – Narrow-necked jars; H – Wide-mouthed bowl/jar; J – Storage Jars; K – Narrow-necked jars/flasks; L. – Flagons; M – Globular Beakers; N – Beakers (inc. poppyhead); O – Biconical Vessels; P – Cups; Q – Shallow Dishes; R – Deep Dishes; S – Bowls; T – Dish/Bowl; U – Miscellaneous Bowls; Z – Miscellaneous Forms.

Dating evidence for each form has been determined from established sequences, or chronologies, particularly from London and

the Thames Estuary. A number of forms have an extended date range. Reference is given at the end of each group to specific dating evidence, where possible, and the predominant fabric(s) for each form are emboldened (fabrics with less than four sherds represented are not listed). Correspondence of this form series with the original interim type series (Jones & Rodwell 1973) is given in [Table 3.7](#).

A. JARS

This category represents a range of neck-less ledge-rimmed jars, or lid-seated jars. These forms were produced at Mucking, Billericay, Gun Hill West Tilbury, and probably several other sites in south Essex. There are a wide range of rim forms and, although some attempt has been made to sub-divide, this has only been done on a broad basis. There are a range of fabrics, including shell tempered, vesicular and sand inclusions. A number of these vessels have graffiti on the shoulder. This type includes Jones and Rodwell Type F: Ledge-rimmed jar (1973, figs. 5.24–30). At Mucking these forms were made in Kilns 1, 2 and 6 and the smaller kilns (See Kiln Products).

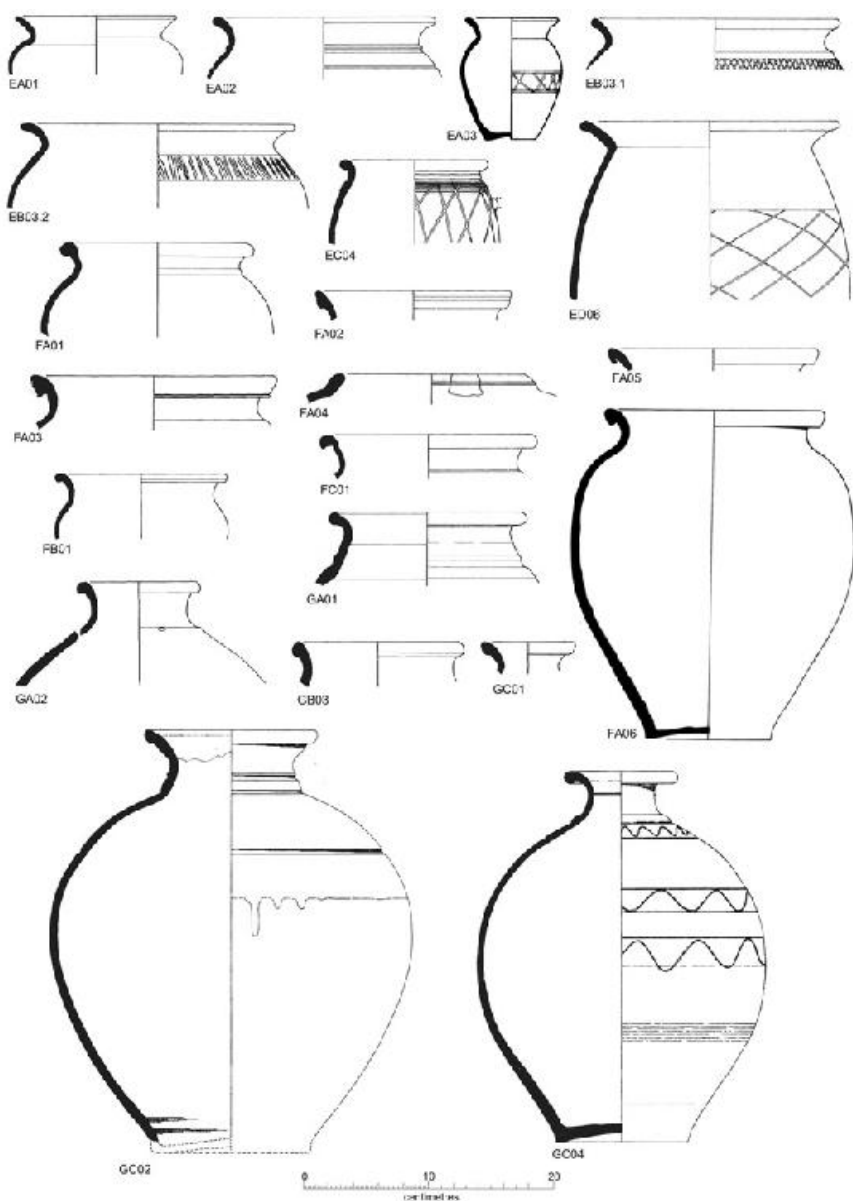


Figure 3.19. Pottery type series: E, F and G forms.

The date range is from AD 50/60 to 100/10 in BL fabrics and AD 100 to 250 in the grey wares, although the form is probably most common in the range 50/60 to 120/30. It is not well represented in assemblages away from the Thames Estuary, and, even there, it is restricted to a limited range of sites. This makes more precise dating difficult.

AB02 Jar with bifid rim in **BLA1** fabric. These forms are likely to be Mucking kiln products. EVE 9.39.

AB02.1 Jar with small bead rim. Below the rim is a perforated hole and the body is plain. However, the base is missing.

AB02.2 A variant of AB02.1. Plain body and missing base. Date: AD 50/60–110/20.

AB03 A flattened bead rim jar similar in form to AB02. Highshouldered vessel with no apparent decoration. This form was produced in **BLA1**, BLA2, BLA3, BLA4, BLB1, BLB2 and BLC1 fabrics. EVE 51.54. Date: AD 50/60–100/10.

AB04 Medium-mouthed jars in **BLA1**, BLA2, BLA3, BLA4 and GRYS fabrics. There were three variants included within the working Type Series representing this form. The illustrated GRYS example has a band of burnished acute lattice from the shoulder to three quarters of the way down the body. Below a clear zone with plain base. The other examples have plain bodies. EVE 3.68. Date: AD 50/60–100/10, except for a small number in GRYS, which are dated AD 120–60 (Monaghan 3E5; Gillam 1970, no. 118).

AB05 This form, in the working type series, was represented by 10 different examples. This form is illustrated by three variants. It is probable that this form is a Mucking kiln product. The form was produced in a number of different fabrics: BBT2, **BLA1**, BLA2, BLA3, BLA4 and GRY. EVE 21.27.

AB05.1 Squared bead rim jar with shoulders and plain body.

AB05.2 High-shouldered, wide-mouthed bead rim jar with a groove below the rim. A smaller version of AB05.1.

AB05.3 A wide-mouthed flattened bead rim jar with graffiti on the shoulder.

Date: AD 50/60–100/10 in BL fabrics and AD 40–150/70 in GRY and BBT2 fabrics (Monaghan 3F3).

AB06 Ledge-rimmed jar. This form was represented in the working type series by 58 variants of wide-mouthed ledgerimmed jars. Some examples had no decoration, whilst others had graffiti on the shoulder. The illustrated examples show the diversity of forms included in this category. Forms AB06.1, AB06.2 and AB06.3 reflect variations in the rebated, or ledge, rim. These three examples had no body decoration. The lower part of the jars did not survive. AB06.4, AB06.5 and AB06.6 are variations of rebated wide mouthed jars with graffiti on the shoulder. No bases in this latter category are illustrated. These forms were produced in the following fabrics: **BLA1**, BLA2, BLA3, BLA4, BLB1, BLB2, BLB6, FG,

GRY, GRYS and GVC. Mucking Type F (Jones & Rodwell 1973, fig. 5.27); this is also similar to Chelmsford G5 1.1 (Going 1987) and Palmers' Girls School (Rodwell 1983). Date: AD 50/60–100/10 in non-grey ware fabrics (EVE 118.8) and AD 100–230/50 in grey wares (EVE 4.3).

AB07 Extended ledge-rimmed jar, Mucking Type G (Jones & Rodwell 1973, fig. 5.34). This form is made in a number of different fabrics: BLA1, BLA2, **BLA3**, BLA4, BLB2, BLB3, **GRY**, GRYS and GVC. Four examples of this type were included in the working Type Series. The four examples are all very similar; plain, wide mouthed jars with no decoration. Date: AD 50/60–100/10 in non-grey ware fabrics (EVE 46.2) and AD 100–230/50 in grey wares (EVE 39.0).

AB08 Wide-mouthed jar with internal concave rim and plain body. The examples do not survive below the shoulder. This form occurs in **GRY** fabric (EVE 1.3). Mucking Type G.35. Similar to Cam 307. Date: AD 110/20–180/90.

AC05 Wide-mouthed bowl/jar with graffiti on the shoulder. This form was produced in **BLA1** (EVE 0.6). This is a Mucking kiln product. Mucking Type F (variant). Date: AD 50/60–100/10.

AC06 Wide-mouthed bowl/jar lid-seated, rebated, rim with graffiti on shoulder. In the working Type Series AC06 was represented by eight different examples. The illustrated examples include three different forms. This form was produced in the **BLA1** (EVE 1.2). Similar to Mucking Type G. Date: AD 50/60–100/10.

AC06.1 Wide-mouthed ledge-rimmed bowl/jar with graffiti on the shoulder. This is very similar in form to AB06. Mucking Type F (Jones & Rodwell 1973).

AC06.2 Squared bead rim wide-mouthed jar with a small groove below the rim and graffiti on the shoulder. This form is similar to AC05.

AC06.3 Rebated rim, wide-mouthed jar with graffiti on the shoulder.

AC08 Wide-mouthed jar in BLA1, BLA3, GVC, GRY and **GRYS** fabrics. Similar to Mucking Type G.38 (Jones & Rodwell 1973). Date: AD 50/60–100/10 in non-grey ware fabrics (EVE 0.54) and AD 100–250+ in grey wares (EVE 38.3).

AC09 Wide-mouthed jar with undercut rim in FG, GVC, GRY, GRYS and GFNB fabrics. Date: AD 50/60–100/10 in nongrey ware fabrics (EVE 0.8) and AD 100–250+ in grey wares (EVE 4.9).

AD05 High-shouldered jar with prominent bead rim and

horizontal rilling on body. Cam 260a in the following fabrics: BLA1, BLA4, BLB1, **BLB2** and **BLB3** (EVE 1.1). This is unlikely to have been produced in the Mucking kilns. Date: AD 50/60–80/90.

AF05 Flattened bead rim wide-mouthed jar with plain body in BLB1 and **BLB2** fabrics (EVE 0.3). This form may, or may not, be a Mucking product. Date: AD 50/60–100/10.

B. MEDIUM-MOUTHED JARS

High-shouldered, wide-mouthed jars/bowls. Within this category are a wide range of rim forms, profiles and decoration. Most forms within this type are not Mucking kiln products. Most subdivisions were represented by a number of variants or widely differing forms.

BA01 In the working type series this form was represented by five variants. The illustrated examples show the extremes of form BA01, although this type should have been divided into two distinct types. These mainly occur in **BLA4** (EVE 1.1). Date: AD 50/60–100/10.

BA01.1 Bulbous high-shouldered jar. There is a small cordon at the base of the neck, below which is a fingernail impressed decoration on the shoulder.

BA01.2 Bulbous high-shouldered jar with pronounced cordon at the base of the rim. There are incised lines on the cordon.

BB02 Wide-mouthed bowl/jar with squared bead rim in **BLA2** and **BLA3** fabrics with burnished lattice decoration on the shoulder and a number of horizontal grooves on the lower body (EVE 0.2). Date: AD 80/90–110/20.

BC01 In the working Type Series there were five examples showing diverse forms and decoration. The illustrated forms show the extreme range of vessels. These forms were produced in **BLA4** fabric (EVE 1.5). Date: AD 70/80–120/30.

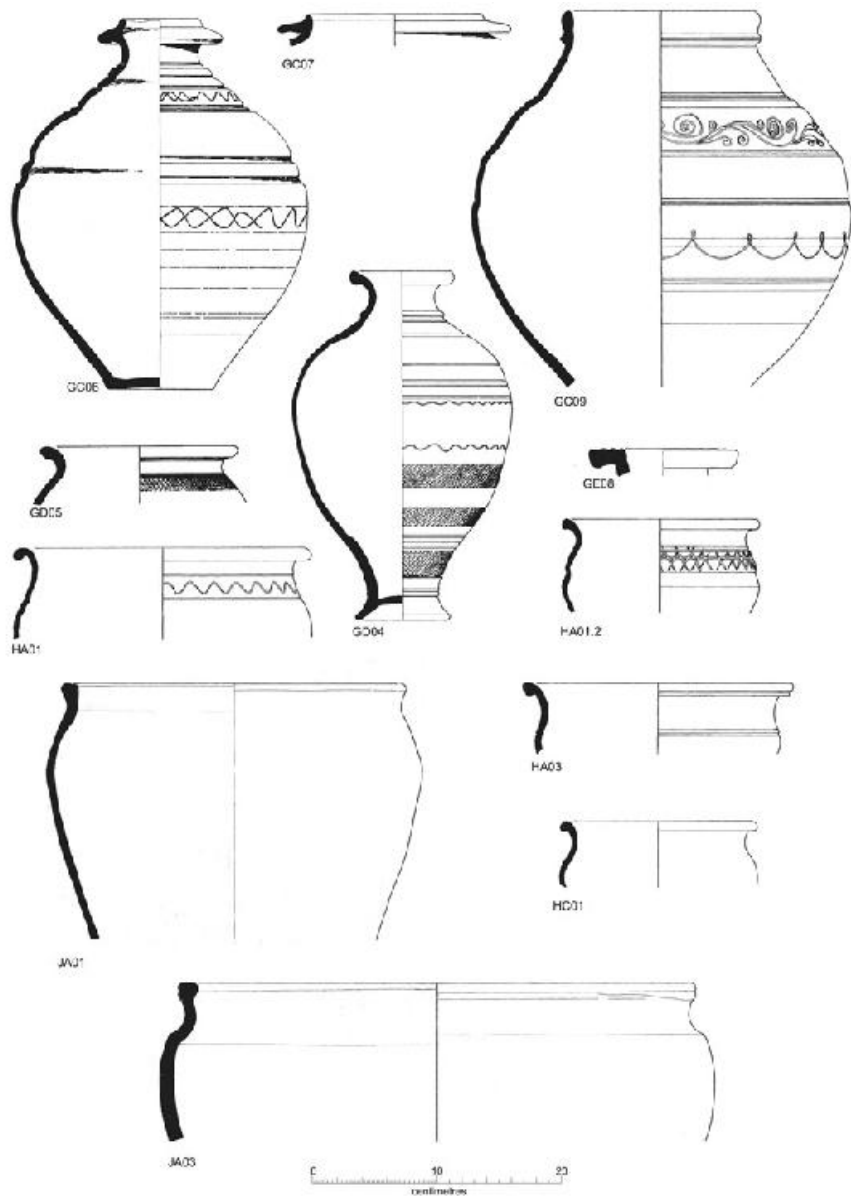


Figure 3.20. Pottery type series: G, H and J forms.

BC01.1 Wide-mouthed bead rim jar, with a pronounced cordon on the shoulder. There are two bands of impressed decoration below the cordon. This form is closer to BA01 than BC01.2.

BC01.2 Wide-mouthed jar with small squared bead rim. There is a band of horizontal fingernail impressed decoration, below

which is incised 'tree motif' decoration.

BC02 Wide-mouthed high-shouldered jar with internally rebated ledge rim with a cordon, or groove, on the shoulder. Below the shoulder is a band of incised zigzag lines in **BLA1**, **BLA3** and **BLA4** fabrics (EVE 1.7). In the working type series there were four variants representing BC02. The rim form appears as a Mucking product. However, the overall form and decoration is not typical of a Mucking kiln product. Date: AD 70/80–120/30.

BC03 In the working type series there were 11 significantly different forms of BC03. The rim and body forms were all significantly different. Some of the forms should have been classified as AC05, BC01 and BC02. This type was produced in **BLA3** and **BLA4** fabrics (EVE 4.1). Two examples had perforations below the rim. Of these, one example came from Kiln 22. The two examples included in the illustrated Type Series show some variations, but not the extremes. Date: AD 70/80–120/30.

BC03.1 High-shouldered, wide-mouthed jar with upright rim.

BC03.2 High-shouldered, wide-mouthed jar with upright rim with a band of burnished chevrons on the shoulder.

C. CORDONED JARS — WIDE-MOUTHED CORDONED JARS

A range of cordoned jars that include a number of Mucking kiln products.

CA01 Everted rim, cordon on shoulder and groups of vertical incised/burnished lines. Cam 229 in **BLB1** and **BLB2** fabrics. The working Type Series included three very different forms; therefore it is impossible to distinguish which form is represented as CA01. Date: AD 80/90–120/30 (EVE 2.6).

CB01 An incomplete profile with missing rim, which is difficult to assign to a specific type. It is possibly Cam 253, in **BLB2** fabric (EVE 1.6). Date: AD 50/60–80/90.

CC01 Cavetto rim, wide-mouthed jar with cordon below the rim and a large cordon at the base of the neck/top of the shoulder. Other examples of this type have a number of cordons on the shoulder. These were produced in **BLA4**, **BLB1**, **BLB2** and **BLC2** fabrics (EVE 11.9). As with CA01 a number of significantly different variants were included in the working Type Series and it is impossible to determine which form represents CC01. Date: AD 50/60–80/90.

CC02 Bead rim, wide-mouthed jar with cordons on the shoulder in **BLB1**, **BLB2**, and **BLB3** fabrics (EVE 1.8). Date: AD

50/60–80/90.

CC03 Everted rim, wide-mouthed jar with two, or more, cordons on the shoulder in **BLB1** fabric (EVE 1.0). Dated: AD 50/60–80/90.

CC04 Thickened cavetto rim, wide-mouthed jar with a small cordon on the shoulder in **BLA2**, **BLB1**, **BLB2** and **BLB3** fabrics (EVE 7.7). Date: AD 50/60–80/90.

CE01 High-shouldered wide-mouthed jar. S-shaped profile with a cordon between two grooves on the shoulder in **BLB1**, **BLB2** and **BLC1** fabrics (EVE 1.7). Date: AD 50/60–80/90.

CF01 Wide-mouthed jar/strainer. There are groups of vertical incised lines on the neck and two cordons on the shoulder. The lower part of the body has a number of perforations. This form was produced in **BLB2** and **BLC2** fabrics (EVE 0.9). Date: AD 50/60–80/90.

CG01 A wide-mouthed jar, with cordons on the shoulder and upper body. There are bands of vertical incised lines on the lower body. This form was produced in **BLB1**, **BLC1** and **BLC2** fabrics (EVE 1.2). There is a graffito on the base; variations of such decoration have been noted from a number of different sites. Date: AD 50/60–80/90.

CH03 A wide-mouthed jar in various sizes, from cup size to large jar. In the working type series there were a number of widely differing rim forms, which is reflected in the wide range of fabrics: **BLA4**, **BLB1** and **BLB2** (EVE 3.4). The illustrated example is likely to have been a Mucking kiln product. The decorations include irregular burnished wavy line/lines, acute lattice and grouped oblique lines. Date: AD 90/100–160.

CJ04 A narrow-necked jar with a squared bead rim. There are groups of burnished/incised lines on the shoulder between two cordons. A variant of this form has zigzag decoration between the cordons. In the working type series there were a number of variants with different rim forms. One variant should be classed as CJ05. This form was produced in **BLA4**, **BLB1**, **BLB2**, **BLC2** and **GVC** fabrics (EVE 6.1). Date: AD 50/60–80/90.

CJ05 Narrow-necked jar with hook rim in **GVC** fabric (EVE 0.8). The illustrated example has burnished grouped acute angle lines on the shoulder between the cordon and grooves. In the working Type Series there were four variants with very different rim forms. Date: AD 110/20–220/30.

CK01 High-shouldered jar with three cordons on the shoulder, in **BLB1**, **BLB2** and **BLC2** fabrics (EVE 1.5). Date: AD 50/60–

80/90.

CL01 Narrow-necked jar similar to Cam 234; Broomhey Farm, Cooling, Kent (Miles 2004, 333, fig. 12), where this occurs as kiln waste; Monaghan Class 3A5.1. See Mucking RB Cemetery II, Cremation 791 (none recorded in database). Date: AD 170/90–210/30.

CM01 A wide-mouthed bowl/jar with a perforated base in **BLB1** and **BLB2** fabric (EVE 2.3). This form is very similar to Cam 218a. Date: AD 50/60–80/90.

CN01 A wide-mouthed bowl/jar in **BLB1** and **BLB2** fabric (EVE 0.8). There are a number of wide and narrow cordons on the body. Some examples of this type have perforations at the top of the shoulder and just below the maximum girth. Date: AD 50/60–80/90.

CP06 The illustrated example has an internal flange rim for lid seating. This form was produced in **BLB1** fabric only (EVE 0.1). In form it is closest to Cam 252. Date: AD 50/60–80/90.

CQ08 Narrow-necked, in **BLB1** and **BLB2** fabrics (EVE 2.9; Not illus.). Date: AD 50/60–80/90.

D. WIDE-MOUTHED JARS

A range of wide-mouthed jars, some Mucking Kiln products.

DA01 In the working type series there were five variants of this form, which included both bead and hook rim jars. The illustrated example has an everted rim with a short neck. This example is plain, although other examples have incised lines or dots on top of the shoulder. This form was produced in a wide range of fabrics: **BLA1**, **BLA2**, **BLA3**, **BLA4**, **BLC2** and **GRY**. Some examples were burnt and were probably Mucking kiln products. Date: AD 50/60–110/20 in non-grey ware fabrics (EVE 12.0) and AD 110/20–180/90 in grey wares (EVE 1.6).

DA02 In the working type series there were seven different variants. The illustrated example has a flattened bead rim. This form was produced in **BBT2**, **BLA3**, **BLA4**, **GRY** and **GVC** fabrics (EVE 1.4). This form may be a variant of Cam 219. Date: AD 50/60–110/20.

DB01 An internally flattened bead rim jar with a short neck and cordon on the shoulder. This form was produced in a very wide range of fabrics, including: **BLA3**, **BLA4**, **BLB1**, **BLB2**, **GRY**, **GVC** and **TRA**. This apparent wide range of fabrics reflects the problem of interpreting Mucking pottery. The wide range most likely represents an over-classification of fabric.

The form was probably produced in BLA and GRY fabrics. TRA fabric is highly unlikely and seems to represent burnt examples that would indicate Mucking kiln waste. Date: AD 50/60–110/20 in non-grey ware fabrics (EVE 10.2) and AD 110/20–160/70 in grey wares (EVE 3.1).

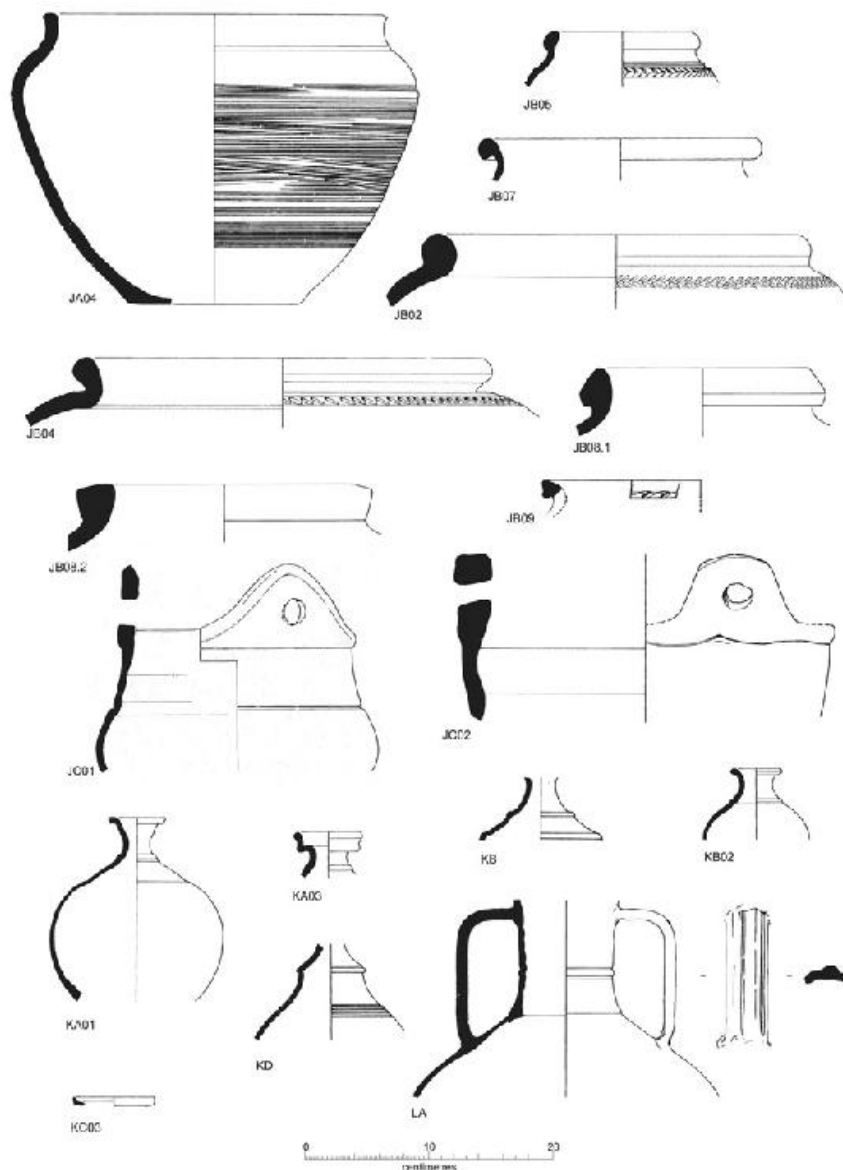


Figure 3.21. Pottery type series: J, K and L forms.

DB03 The working type series had a number of variants with very different rim forms. The illustrated example, with a squared bead and upright neck, occurs in a wide range of fabrics: BBT2, BLA1, BLA2, BLA3, BLA4, BLB1, BLB2, BLB3, BLC1, BLC2, GFNB, **GRY**, GRYS and GVC. This form is similar to Chelmsford G16 2.1 (Going 1987), although this form is rare at Chelmsford. The form is also present at Highgate, where it is likely to have been a kiln product (Brown & Sheldon 1974). Date: AD 50/60–110/20 in non-grey ware fabrics (EVE 7.2) and AD 110/20–160/70 in grey wares (EVE 4.3).

DB05 There are three variants of this form in the working Type Series. The illustrated example has an upright triangular rim and short neck. This form was produced in **BLA1** fabric (EVE 1.1). There is no equivalent form in Chelmsford. However, it is closest to Cam 266. Date: AD 50/60–110/20.

DB07 A flattened, outward curving, hook rim with short neck and high shoulder. The form was produced in BLA3 and **BLA4** fabrics (EVE 2.4). This form is a variant of Cam 277. Date: AD 50/60–110/20.

DB08 The form is represented by a hook rim only, without neck or body, which makes positive classification impossible. This form was produced in BLA3, BLA4, BLB4, **GRY** and GVC fabrics. This form is closest to Cam 266 & 268. See DC07 and FA01. Date: AD 50/60–110/20 in non-grey ware fabrics (EVE 2.4) and AD 110/20–160/70 in grey wares (EVE 3.4).

DB10 It is not possible to identify this as either a wide-mouthed jar, or bowl/jar. This form was represented by a very small rim fragment in **GRY** fabric (EVE 1.4). Date: AD 80/90–150/60.

DC01 This form is closest to Cam 264. The working Type Series had a number of variants, with both plain and burnished lattice bodies. It was produced in BLA4, **GRY**, GRYS and NSP fabrics. Date: AD 50/60–100/10 in non-grey ware fabrics (EVE 2.4) and AD 110/20–160/70 in grey wares (EVE 3.4).

DC06 Narrow-necked jar produced in **BLA4** fabric only. The rim is almost upright and forms a continuous curve with the body. It is very similar to Marsh & Tyers 111F3; at Southwark it occurs in a BB1 fabric and in a Hadrianic deposit. However, a very similar form occurs at Broomhey Farm, Cooling, Kent (Miles 2004, 328, fig 9.63) which is Monaghan 3B1.1 and is dated AD 50/70–100. The example from Broomhey Farm occurs in an early brine tank. Date: AD 50/60–100/110 in

non-grey ware fabrics (EVE 0.3) and AD 110/120–160/70 in grey wares (EVE 0.1).

DD03 A wide-mouthed jar with a high shoulder with grooves and cordon. This form is similar to Ver. 862. This form was produced in **NSP**, a non-specific fabric (EVE 0.1). Date: AD 120/30–160/70.

DD04 Jar with short, thickened, everted rim with two grooves on top of the shoulder. This form is similar to Ver 858 & 629. It was produced in **BLA3** fabric (EVE 1.1). Date: AD 50/60–110/20.

DD09 This form is rebated rim, neck-less jar with a cordon on the shoulder. It is very similar to AB06 and should have more accurately been placed into that Type. The form was produced in **BLA3** fabric (EVE 0.3). The date range would seem to be AD 120/30–160/70, although it could occur as early as AD 70/80.

E. JARS

EA01 Everted-rim jar. This was a Mucking kiln product Type P (Jones & Rodwell 1973, fig. 10.95), which can be decorated with burnished open lattice. In the working Type Series there were eight variants produced in an unusually wide range of fabrics, including: BBT2, BLA1, BLB1, BLB2, BLB3, BLC1, BLC2, GFN, GFNB, **GRY**, **GRYS**, GVC, GVC2 and LNA1. This form was also produced on Thames side sites in north Kent. Monaghan (1987) Class 3J9, date: AD 170–250+. MoLAS Type 1 G <86>, date: AD 180–250. Date: AD 50/60–110/20 in non-grey ware fabrics (EVE 2.2, but possibly mis-assigned to this class) and AD 170/80–250+ in grey wares (EVE 8.9).

EA02 Jar with a curved everted rim. This form is a variant of Jones and Rodwell Type P (1973, fig. 10.94). In the working type series there were eight variants of this form, some with burnished lattice decoration on the body. This form was produced in GFN, **GRY**, **GRYS** and NSP fabrics (EVE 14.6). As with EA01, this form is found in a handful of other fabrics, which is likely to represent misidentification. Date: AD 120/30–250.

EA03 Jar with cavetto rim. Some examples have burnished lattice decoration on the body. This form was produced in **GRY** and **GRYS** fabrics (EVE 2.3). This form is a variant of Cam 538. Date: AD 120–250.

EB03 The working type series included a number of variants of this form. For the purpose of illustration two variants are shown. This form was produced in BLA3, GRY and **GRYS**

fabrics (EVE 11.1). The variant forms have a range of body decoration, which includes burnished lattice, burnished oblique lines and burnished/incised chevrons. Date: AD 110/20–170/80.

EB03.1 Curving everted-rim wide-mouthed jar, Mucking Type P (Jones & Rodwell 1973, fig. 10.98); Monaghan (1987) Class 4A1, date: AD 70–120/50.

EB03.2 Curving everted-rim wide-mouthed jar, Mucking Type P (Jones & Rodwell 1973, fig. 10.95); Monaghan (1987) Class 4A1, date: AD 70–120/50.

EC04 This is a rare form of tankard with burnished lattice decoration on the body, in **GRYS** fabric (EVE 0.0). This form is similar to one produced in the Brue Valley, Somerset. However, it is impossible to determine the source of this vessel. The only other published example of this form is from Thomas Street, Southwark (Dennis 1978). Date: AD 140/50–300.

ED06 Everted-rim jar with burnished obtuse lattice decoration, in **GRYS** fabric (EVE 2.1). Monaghan 3H5.1. MoLAS Type B284.1 F <12>. Gillam (1970) Type 148. Date: AD 225–300.

F. MEDIUM-NECKED JAR

FA01 There were a number of different rim forms included in the working type series. These forms were produced in a number of different fabrics: **GRY**, **GRYS**, **GVC**, and **GVC2** (EVE 345.5). Date: AD 120/30–250.

FA02 This is an incomplete profile of a rim only. It is impossible to determine the exact form. In the working Type Series there are five variants of this form. This form was produced in **GRY** fabric (EVE 2.7). Date: AD 120/30–250.

FA03 Neck and rim only, which makes it difficult to determine the form. However, the form would seem to be a variant of Jones and Rodwell Type J (1973, fig. 9.49). The form was produced in **GRY** and **GVC** fabrics (EVE 10.6). Date: AD 150/70–300+.

FA04 An upright rim only, as with FA03 it is impossible to determine the exact form. This is very similar in form to JB05. The form was produced in **GRY** fabric only (EVE 0.6). Date: AD 110/20–180/90.

FA05 The working type series included one hook rim that was too small to determine the exact form. This form may be a variant of FA06 and was produced in **BLB2**, **GFNB**, **GRY**, **GRYS**, **GVC** and **NSP** fabric (EVE 72.0). Date: AD 100–250/300.

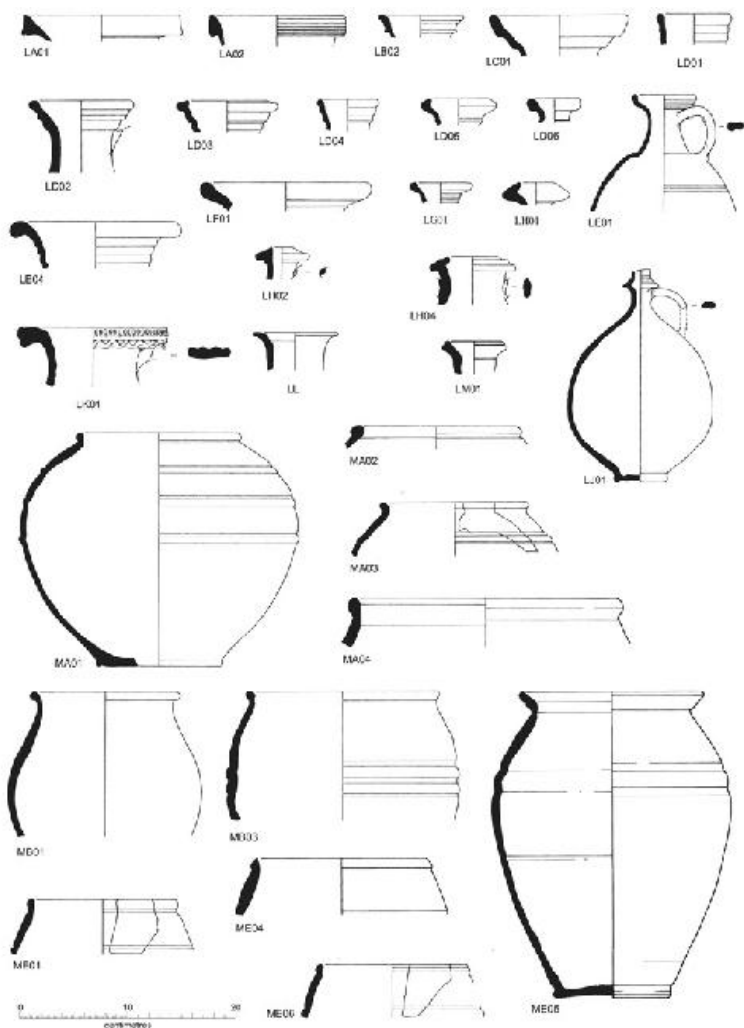


Figure 3.22. Pottery type series: L and M forms.

FA06 A large storage jar with hooked rim in GRY and GVC fabrics (EVE 14.4). This was a Mucking kiln product, Jones and Rodwell Type J (1973, fig. 6.45). In Crem 1085 this was used as a cinerary urn. Similar vessels occur in the London cemeteries. Date: AD 100–250/300.

FB01 A wide-mouthed, cavetto rim bowl/jar in GRY and LNA1 fabrics (EVE 2.5). This is likely to be a Mucking kiln product, a variant of Jones and Rodwell Type K (1973, fig.

7.56). Date: AD 120–230/50.

FC01 The working type series showed a rim and neck of narrownecked jar, possibly a variant of DB07, which is a Mucking product. The form was produced in **GRY** fabric only (EVE 0.4). Date: AD 110/20–180/90, although if a variant of DB07 it would be within the range AD 110/20–160/70.

G. NARROW-NECKED BULBOUS JARS

GA01 Narrow-necked jar with outward curving squared bead rim. The working Type Series had three variants, although no complete profile. This form was produced in **BLA1** and **GRY** fabrics. Date: AD 50/60–110/20 in non-grey ware fabrics (EVE 4.5) and AD 110/20–210 in grey wares (EVE 0.3).

GA02 Narrow-necked jar with outward curving flattened bead rim. This form is a variant of Jones and Rodwell Type N (1973, fig. 8.70). It was produced in **NSP** fabric (EVE 0.8). Date: AD 110/20–210.

GB03 A narrow-necked jar with squared bead rim. The working type series had four variants, including an internal ledgerimmed/ rebated rim narrow neck jar. No examples are complete, or part-complete profiles recorded. The wide range of single sherds in different fabrics probably reflects both misidentification of fabric and form (EVE 1.7). The date range reflects the illustrated example, which is AD 80/90–120/30. However, this date range could be earlier, for example: AD 60/70–140/50.

GC01 Narrow-necked outward curving triangular bead rim. This form is represented by a rim only and is closest in form to Jones and Rodwell Type N (1973, fig. 8.72). The form was produced in **GRY** and **GRYS** fabrics (EVE 3.3; the handful of sherds in **BLB** fabrics is assumed to be misidentification). Date: AD 120/30–250+.

GC02 A large narrow-necked jar with outward curving flattened bead rim. This form occurs as medium and large jars. Examples of this form have burnished or slip decoration on the upper body. The form is Jones and Rodwell Type N (1973, fig. 8.70). It was produced in **GRYS** fabric (EVE 1.2). Date: AD 120/30–250+.

GC04 Narrow-necked jar with an outward curving hook rim. The working Type Series included several variants of this form. The usual form of decoration was a single burnished wavy line on the shoulder or body, or several bands of burnished wavy lines between grooves on the body. This form is Jones and Rodwell Type N (1973, fig. 8.69). This form was

produced in GRY, **GRYS** and GVC fabrics (EVE 33.9). The two sherds in BLB fabrics probably represent a misidentification of the fabric. Where this form occurs at other Thames-side sites it is inevitably in one of the GRY fabrics. Date: AD 120/30–250+.

GC06 Narrow-necked jar with flanged rim. This is one of the more exotic Mucking kiln products. It usually has the characteristic burnished wavy line decoration on the neck and/or body and there are usually three cordons on the neck and one large cordon on the body. This is Jones and Rodwell Type N (1973, fig. 8.73). This form was produced in **GRYS** fabric (EVE 3.5). Date: AD 120/30–220.

GC07 A flanged rim only: Jones and Rodwell Type N (1973, fig. 8.74). It was noted by Jones and Rodwell that this form had an exceptionally large diameter (190mm). This should probably have been more accurately classified as a bowl. However, there is no complete profile associated with this form, which makes accurate classification impossible. This form was produced in GRY and **GRYS** fabrics (EVE 5.3). Date: AD 120/30–250+.

GC09 This is one of the elaborately decorated vessels with upright rim, which was probably a Mucking kiln product. This form usually occurs with cordons and grooves on the neck, shoulder and body, but no other decoration. A similar plain example occurs at Orsett (Carter 1998, fig. 63.20). The illustrated example is a rare variation. There is no parallel in the Jones and Rodwell interim Type Series. This form was produced in GRY, **GRYS** and **GVC** fabrics (EVE 5.6). Date: AD 120/30–250+.

GD04 A narrow-necked jar with internally flattened bead rim and pedestal base. There are bands of diamond rouletting on the lower part of the body. This form was made at Palmers Girls' School, Grays (Rodwell 1983). This form was produced in **GRYS** fabric only (EVE 0.1). Date: AD 120/30–250+.

GD05 A jar with outward curving rim and diamond rouletting on the shoulder. The incomplete profile makes positive identification difficult. This form was produced in **GRY** fabric only (EVE 0.0). Date: AD 120/30–220/50.

GE08 A rilled rim narrow-necked jar/flask, although this rim form could also belong to a flagon. As with GC07 the rim only makes positive classification impossible. This form was produced in **GRYS** fabric only (EVE 0.2). Date: probably AD 120/30–220/50.

H. WIDE-MOUTHED BOWL/JAR: RODWELL TYPE K

HA01 Wide-mouthed hook or cavetto rim bowl/jar in GRY and **GRYS** fabrics (EVE 79.7). The working Type Series included a number of variants of Jones and Rodwell Type K. These forms occur in Chelmsford and were certainly produced at Orsett. The illustrated Type Series includes two of the variants. Date: AD 120–230/50.

HA01.1 Cavetto rim wide-mouthed bowl/jar with burnished wavy line on the body, at the top of the shoulder. This form is Jones and Rodwell Type K (1973, fig. 7.58).

HA01.2 Cavetto rim wide-mouthed bowl/jar with burnished lattice decoration on the shoulder. This form is a variant of Jones and Rodwell Type K.

HA03 A wide-mouthed bowl with triangular rim. This form does not appear in the Chelmsford Type Series and would appear to be rare in Colchester. The form would seem to be a variant between Type K and Type L. The complete profile is unknown. This form was produced in **GRY** fabric only (EVE 0.6). The date range most likely fits into the period AD 120–230/50.

HC01 A wide-mouthed bowl/jar, but it also bears a close similarity to variants of FB01. It is a variant of Jones and Rodwell Type K produced in **GRYS** fabric (EVE 1.5). See Mucking Cemetery IV, Crem 1085. Date: AD 120–230/50.

J. STORAGE JARS AND BUCKETS

JA01 A wide-mouthed, high-shouldered triangular rim jar in **BLA1** fabric (EVE 1.7). The working type series included five variations. The illustrated example is unlike any known Roman form and could be later Iron Age. Date: AD 40/50–80/90.

JA03 A wide-mouthed jar with bifid flattened rim in **BLA1** fabric (EVE 0.5). The working type series included three very different forms as JA03. The illustrated example is very similar to a thirteenth-century form from Barking (Hull 2002, 174, fig. 9.34). Date: AD 70/80–120/30.

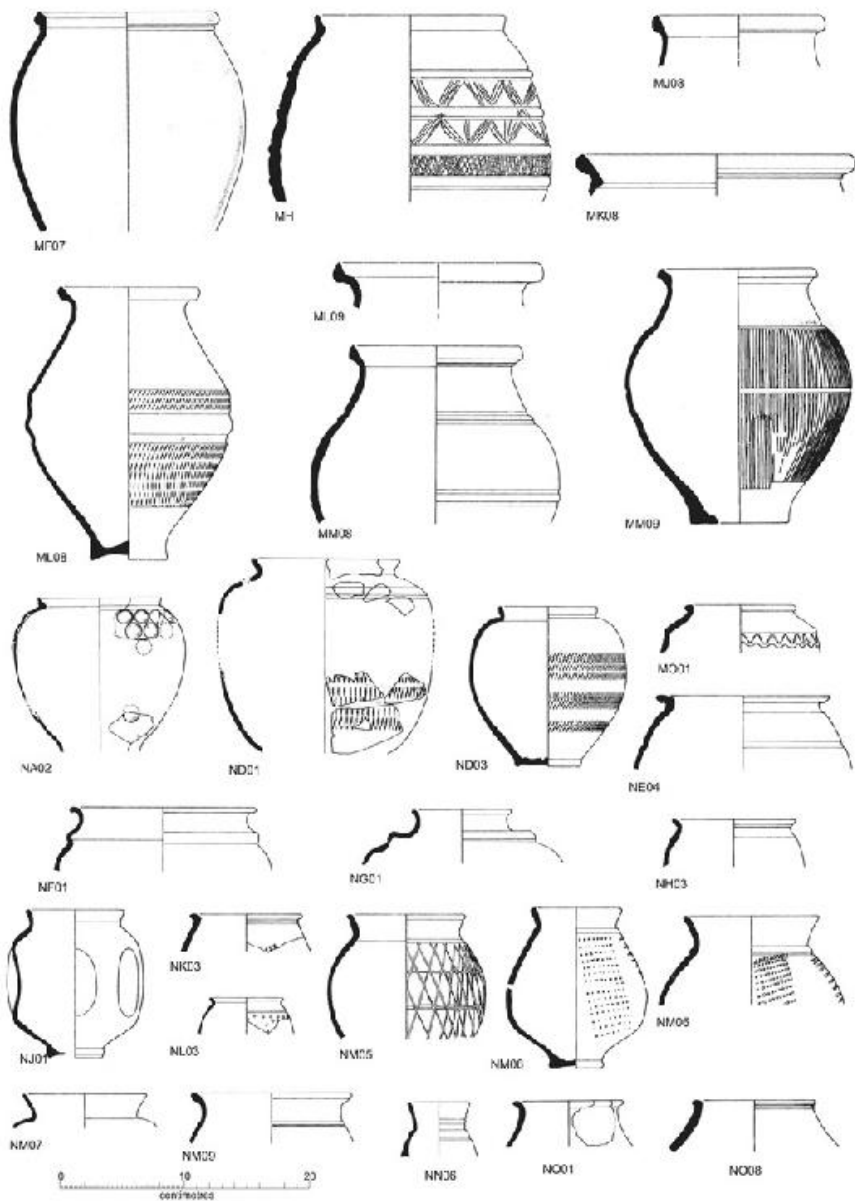


Figure 3.23. Pottery type series: M and N forms.

JA04 High-shouldered, wide-mouthed, combed decoration, in BLB2 and BLB3 fabrics (EVE 0.5). Possibly later Iron Age (see Thompson, Prehistory Vol.)? Date: AD 40/50–120/30.

JB02 Large storage jar with bead rim, examples are both plain and decorated. This is Jones and Rodwell Type S (1973, fig.

10.108), or a variant. The form was produced in BLA1, BLA4, GRY, **GVC**, GVC2 and GVC3 fabrics (EVE 11.0). Jones and Rodwell stated that larger examples of this form occur in a very coarse fabric and smaller examples occur in a finer grey fabric. This same form occurs at Gun Hill, West Tilbury (Drury & Rodwell 1973, 81, fig. 16.83 and 84) in a heavily shell-tempered, vesiculated fabric. Date: AD 70–200/50+.

JB04 A large storage jar in **BLA1**, BLB2, GRY and GVC fabrics (EVE 3.5). The working type series included four rim and two base variants, see Mucking RB Cemetery IV, Crem. 1069. The form is a Mucking kiln product, Jones and Rodwell Type S (1973, fig. 10.108). The illustrated example is an extreme variant, but is similar to an example from Gun Hill, West Tilbury (Drury & Rodwell 1973, 81, fig. 16.81). Monaghan type 3D (AD 40/50–250). Date: AD 70–200+.

JB05 A high-shouldered storage jar with a rolled rim and a shoulder groove in GRY and **GRYS** fabrics (EVE 15.0). This form is a variant of GC09. See Mucking RB Cemetery IV, Crem 1080 for illustration. Date: AD 70–200/50+.

JB07 Hooked rim, wide-mouthed necked jar in **GVC** fabric (EVE 1.6). This form may be a Mucking kiln product, a variant of Jones and Rodwell Type K (1973, fig. 7.57). See also Creams 132 and 135. Date: AD 120–230/50.

JB08 A storage jar in **GVC** fabric (EVE 0.9). The working type series include two distinct variants. It is not possible to distinguish which form is represented as JB08. These forms were common and very long-lived. It is not possible to state with certainty that they were produced in the Mucking kilns, although it is likely that they were produced in a Thames side kiln.

JB08.1 A flattened triangular rim, neck-less storage jar.

JB08.2 A triangular rim storage jar. Date: AD 70–200/50+.

JB09 A triangular bifid rim in **GRY** and GVC3 fabrics (EVE 0.7). This is Jones and Rodwell Type V (1973, fig. 11. 123). AD 70–250+.

JC: Bucket

A rare form of bucket of which there are two distinct forms at Mucking. At Chelmsford these were classified as cauldrons (Going 1987), although there are two distinct forms (L1.1 and L2.1) both of which are buckets. The Chelmsford example L1.1 has suspension lugs with a single central perforation, as do the examples from Mucking. However, Chelmsford L2.1 is clearly a totally different type to L1.1 and was erroneously compared to Cam 302. This may have caused

some confusion over the dating of these forms. It is not possible to state whether this form was manufactured at Mucking, although it does occur at Gun Hill, West Tilbury (Drury & Rodwell 1973, 81, fig. 16.80). The example from Gun Hill is unstratified but, as at Mucking, the examples are associated with shell-tempered ledge-rimmed jars. The most likely date for buckets is AD 50/60 to 90/100 based on the associated finds. This type also included a wide-mouthed squared bead rim jar, which strictly should not have been associated. As a result of the inclusion of this third form it is impossible to distinguish the number of buckets present and the represented fabrics. These forms do not occur in the Jones and Rodwell interim Type Series. Thompson (in Prehistory Vol.) notes that these are a special later first-century AD form, found at sites that had been major later Iron Age centres.

JC01 Bucket with rounded perforated lug in **BLA1** fabric (EVE 2.31). Date: AD 50/60–90/100.

JC02 Bucket with square perforated lug (EVE 0.1). There was an insufficient fragment of the vessel surviving to permit accurate reconstruction of the body. Date: AD 50/60– 90/100.

K. NARROW-NECKED JARS/FLASKS

KA01 A narrow-necked jar/flask with a cordon at the top of the shoulder. This may be a longer necked variant of Jones and Rodwell Type O (1973, fig. 9.89). This form was produced in GRY and **GRYS** fabrics (EVE 18.9). Date: AD 110/20–200/10.

KA03 A rim and neck only. This should more correctly have been included in the L category of flagons. This form is very similar to Cam 134 and was produced in ?FLA and **GRYS** fabrics (EVE 0.9). Date: AD 110/20–200/10.

KB01/02 A narrow-necked jar/flask, Jones and Rodwell Type O (1973, fig. 9.89). This is a Mucking kiln product produced in **GFN** fabric only (EVE 5.4). See Mucking RB Cemetery II, Crem 891. Date: AD 110/20–80/90.

KC02 Carinated narrow-necked jar in **GFN** fabric with dash rouletting on upper body above carination (no examples in database). This was probably a North Kent product. See Mucking RB Cemetery I, Crem 26 for illustration. Here the vessel is associated with a copper alloy brooch dated to the second half of the first century AD. Date: AD 70–130.

KC03 Rim only of a narrow-necked jar or flagon, produced in **GFN** and **GRY** fabrics (EVE 0.4). It is not possible to determine the form from the small fragment of rim. Date: Indeterminate.

L. FLAGONS

Flagons are characterised by a narrow elongated neck with moulded rim, either one or two handles and a globular body. Flagons were introduced during the first century AD. Although a few examples have been described as preconquest, this is essentially a post-conquest form. Flagons were made in a number of centres during the first and second centuries AD. Although not made in the kilns at Mucking or Orsett, some flagons were made at Palmers Girls' School. Although the Orsett report shows flagons/ flasks, it is now apparent that only flasks were being manufactured. Classification of flagons depends on shape of the neck and rim, the presence/absence of handles and the fabric. Forms without handles are classified as flasks.

LA?? Hofheim 58. Cam 161 in **CLB** and **FLA1** fabrics (EVE 0.0). This is represented in the illustrated Type Series by neck, handles and shoulder only. Date: AD 40/50–80/90.

LA01 Rim only, probably a Cam 162 produced in **FLB** fabric (EVE 0.5). Date: AD 40/50–80/90.

LA02 Rim only of ring neck flagon in **CLB** and **GRYS** fabrics (EVE 0.4). This is probably a variant of Cam 163a. At Southwark this form is usually associated with pre-Flavian deposits. Marsh and Tyers (1978) suggested that this form developed into a number of different forms. However, it would seem, from the examination of cemetery material from London and elsewhere, that these forms are contemporary rather than sequential. The main sources of production were Brockley Hill and Colchester. Date: AD 40/50–80/90.

LB02 Rim only of a collared flagon, a variation of Marsh and Tyers 1.A.1. A similar form occurs in the Upchurch Marshes and at Hoo, north Kent. This form was produced in **FLC5** fabric only (EVE 0.2). Date: AD 40/50–80/90.

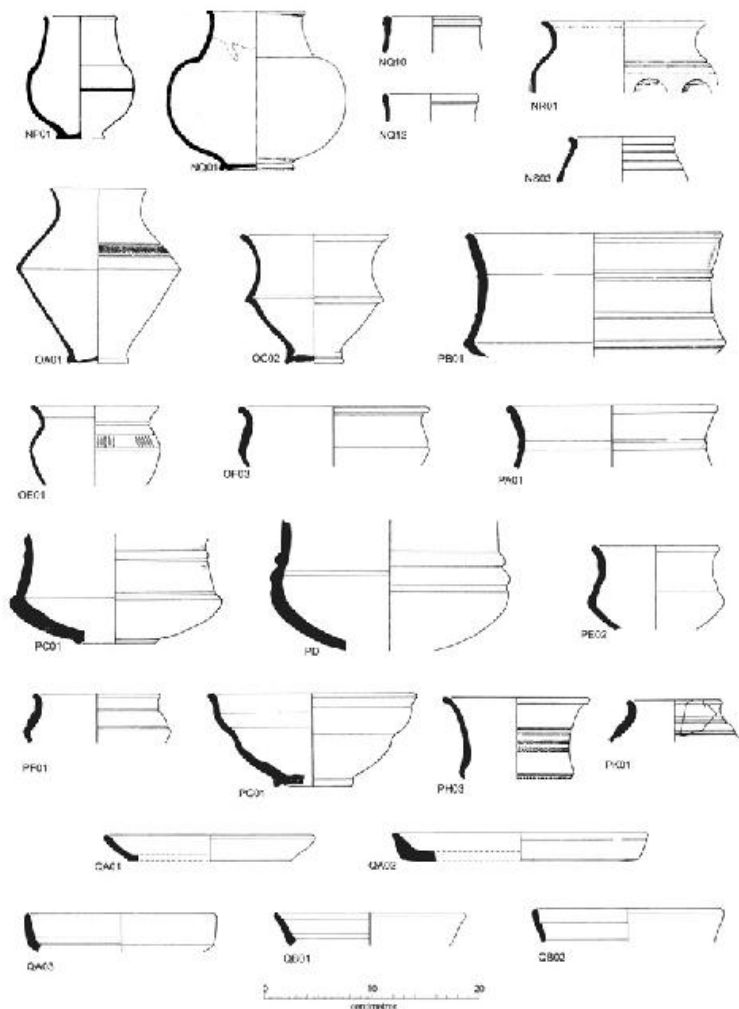


Figure 3.24. Pottery type series: N, O, P and Q forms.

LC01 A rim only of a ring-necked flagon produced in **GB1** fabric (EVE 0.4). This form is probably a variant of Marsh and Tyers 1.B.4. Date: AD 40/50–80/90.

LD01 A rim only of a ring-necked flagon in **FLC5** fabric (EVE 0.1). It is closest in form to Cam 154, although it could also be a variant of Marsh and Tyers 1.B.6. Date: AD 40/50–70/80.

LD02 A ring-necked flagon with flaring rim and a single handle, produced in **FLA3**, **FLC5** and **GRY** fabric (EVE 1.3). A similar form occurs in the Eastern Cemetery London in Crem CB760. The associated pottery is an Alice Holt necked jar and a Highgate wood lid. The suggested date range is AD 60–160

and AD 70–160. The form is closest to Marsh and Tyers 1.B.7. Date: AD 60/70–110/20.

LD03 A rim only of a flagon produced in **BH** fabric (EVE 0.4). Possibly Marsh and Tyers 1.B.4. Date: AD 60/70–110/20.

LD04 Cup-mouthed ring-necked flagon in **BH** and **FLA5** fabric (EVE 1.8). In Burial 19, 126 Great Dover Street, London (<P21> in **VCWS** fabric), the accompanying vessel was a Highgate C Ware high round-bodied necked jar, which are dated to AD 100–160. Date: AD 140–200.

LD05 A rim only of a disk mouth flagon in **BH** fabric only (EVE 0.2). A very similar form occurs at Skeleton Green Crem XLVII (Partridge 1981, 264, fig. 96.36). Date: AD 60/70–110/20.

LD06 Rim only, which could represent a narrow-necked jar or flagon. This form was produced in **FLA2** fabric (EVE 0.3). Date: AD 40/50–80/90, although this is probably too narrow a date range.

LE01 A ring-necked flagon in **FLA2** fabric (EVE 2.6). This form is very similar to Marsh and Tyers 1.B.8. See also Mucking RB Cemetery II, Crem 899.8 and 899.10. Date: AD 120/30–180/200.

LE03 A single handled ring-necked flagon, perhaps of local origin (no examples in database). See Mucking RB Cemetery II, Crem 892.3. Date: AD 120/30–180/200.

LE04 An expanded screw-necked flagon in **FLA2** fabric (EVE 0.2). This is a variant of Marsh and Tyers 1.B.6 <P.173>. Date: AD 110/20–180/90.

LF01 Rim only of a double handled cup rim flagon in ?**FLA6** and **BH** fabrics (EVE 0.2). This is similar to Marsh and Tyers I.J.1. Date: AD 110/20–180/90.

LG01 A flaring mouth flagon with well-moulded rings around the neck, in ?**FLB** and **BH** fabrics (EVE 0.5). This form is similar to Marsh and Tyers 1.B.2. Date: AD 110/20–160/70.

LH01 Disc-mouthed flagon in **FLA1** and **FLA2** fabrics (EVE 0.9). This form is similar to Marsh and Tyers I.B.5. Date: AD 110/20–160/70.

LH02 A disc-mouthed flagon in **BH** fabric (EVE 1.0). This is similar to Marsh and Tyers 1.D.1. This form was almost certainly produced at Brockley Hill (Castle 1973, 37, fig. 2.14). Date: AD 80/90–130/40.

LH04 A two handled hammerhead flagon in **BH** and **FLC4** fabrics (EVE 0.6). There appears to be no similar parallels of this form. Date: AD 80/90–130/40.

LJ01 A flange-necked flagon in **FLA4** fabric (EVE 1.0). This

form is a variant of Cam 360. Date: AD 200–400.

LK01 A flagon with bifid rim and frilled decoration on the rim. The single handle was rilled. It was produced in **FLA2** fabric (EVE 0.3). No parallel examples appear to have been identified. Date: AD 80/90–130/40.

LL01 A long necked flagon with out-turned rim in FLA, FLA2 and FLA3 (EVE 0.1). This is most likely to be a Brockley Hill product (Castle 1973, 37, fig 2.15). Date: AD 80/90–120/30.

LM01 A squared, everted rim flagon in **BH2** fabric (EVE 0.7). Date: AD 80/90–120/30.

M. BEAKERS – GLOBULAR AND BUTT

This category includes globular, girth and butt beakers.

MA: Globular beaker – variants with cordons and/or grooves.

MA01 A globular beaker with internally flattened bead rim. There are three cordons on the vessel equally spaced, on the shoulder and one above and below the maximum girth. This form occurs in BLB1, **BLB2** and GRY (EVE 2.2; the GRY sherds may be a misidentification). In the working Type Series there were two other forms present, the other two examples being ovoid with grooves on the shoulder and body. There are no equivalent forms in Chelmsford, but a similar example occurs at Great Wakering (Birchall 1965). Date: AD 50/60–80/90.

MA02 A bead rim only, with no profile. This is probably a globular beaker, although there is too little to give a positive identification. This form occurs in BLA3 and **GRY** fabrics (EVE 0.7). Date: AD 50/60–80/90.

MA03 A flattened bead rim with cordons on the shoulder in **GRY** and BLB2 fabrics (EVE 1.0). This is not a Mucking product, but was probably made in north Kent or Highgate. Date: AD 50/60–80/90.

MA04 An internally flattened bead rim vessel. The incomplete profile makes positive identification impossible. The illustration could represent variants of globular or girth beakers. This type occurs in BLA4 and **BLB2** fabrics (EVE 0.8). Date: AD 50/60–90/100.

MB01 Hooked rim girth beaker with single sherds in BLB1, BLB2, GRY, NSP and TRA fabrics (EVE 1.2). This form is similar to Thompson B5.5. Date: AD 50/60–80/90.

MD03 Girth beaker with flattened bead rim with grooves and two cordons at the maximum girth. This form occurs in **BLB2** fabric only (EVE 0.1). This form is similar to Peldon Red Hill 117 (Jefferies and Barford 1990, 74, fig. 25 and de Brisay 1975, 9, fig. 4l) and Osea Road Red Hill (de Brisay 1975, 8,

fig. 3b). An archaeomagnetic date was obtained from Peldon from fired clay from the upper level of a hearth giving a date between 10 BC and AD 40. A carbon-dating sample of charcoal from the lower hearth gave a date between 34 BC and AD 134 (Fawn *et al.* 1990, 37–9). This form would be consistent with a date range of AD 50/60–80/90. This form is a variant of Cam 117. In south Essex and north Kent and Chelmsford this form is usually dated to after AD 60. Date: AD 50/60–80/90.

ME01 A butt beaker with an internally flattened bead rim in **BLB1** fabric (EVE 0.7). The incomplete profile makes positive identification impossible, but it is possibly a variant of Cam 112. Date: AD 50/60–80/90.

ME04 As with ME01, there is insufficient profile to allow for definite identification of the form. It is most likely to be a butt beaker and only occurs in **BLB1** fabric (EVE 1.4). Date: AD 50/60–90/100 based on the rim form and fabric.

ME05 An everted rim butt beaker with a cordon on the shoulder in **BLB1** fabric (EVE 1.5). The body is plain, but this form is a variant of Cam 112a. Date: AD 50/60–90/100.

ME06 As with ME01 and ME04, the incomplete profile makes definite identification impossible. The working type series included three distinct rim forms. This type only occurs in **BLB1** (EVE 0.5). A probable date range is AD 50/60–90/100.

MF07 This ovoid beaker in BL fabric is a variant of Cam 118 (EVE 0.3). The undecorated form is rare. Date: AD 50/60–80/90.

MH Butt beaker in **BLB1** and **BLB2** fabrics (EVE 1.6). The wide range of small numbers of sherds in other fabrics probably reflects misidentification. This form is a variant of Cam 112a. Date: AD 50/60–80/90.

MJ08 Internally flattened bead rim butt beaker with single sherds in **BLB1**, **MHA** and **TR?** fabrics (EVE 0.3). This form appears to be a variant of **MK08**, which is similar to Cam 113. Date: AD 60/70–100/10.

MK08 Butt beaker in **BLB2** and **CLB** fabrics (EVE 1.5). The illustrated example of this form is similar to Cam 113. However, the working Type Series included three variants, two very similar; the third should strictly have been classed as a separate form. Date: AD 60/70–100/10.

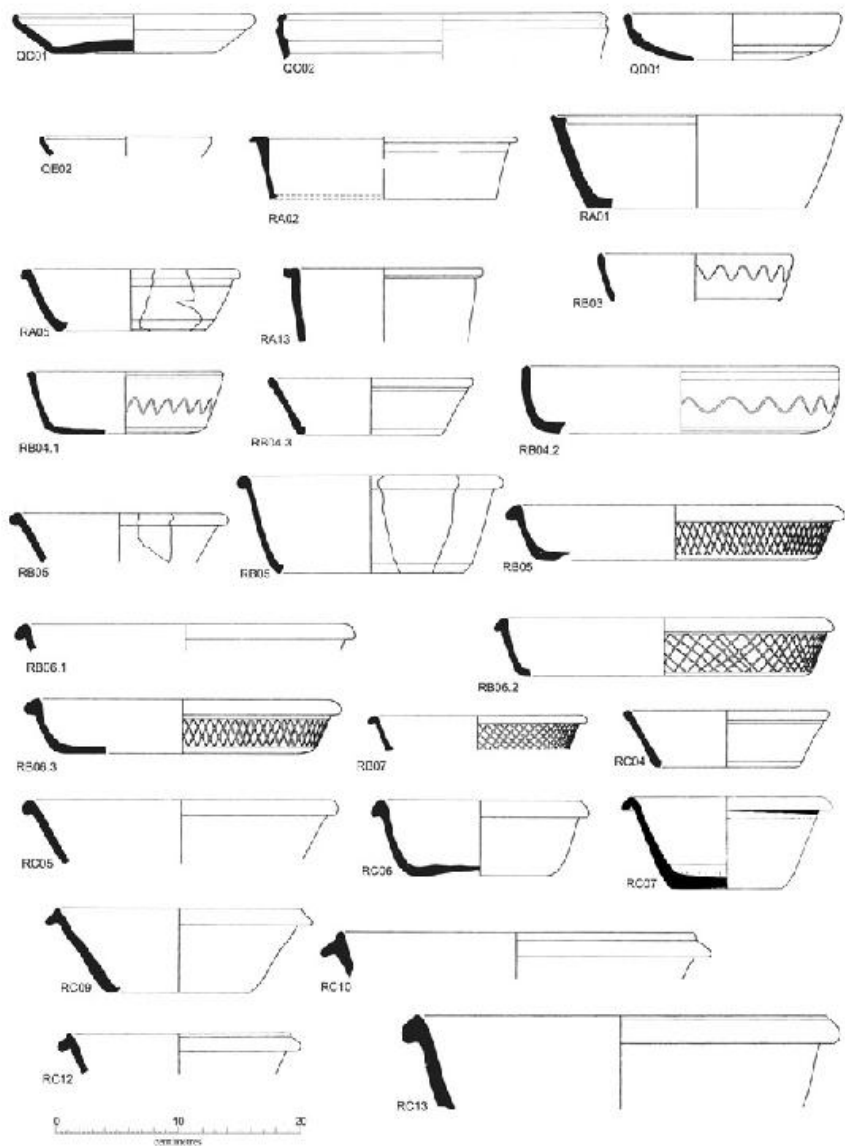


Figure 3.25. Pottery type series: Q and R forms.

ML08 A butt beaker with bands of rouletting on the body in **LNA1** fabric (EVE 1.0). This appears to be a variant of Cam 112b. Date: AD 60/70–90/100.

ML09 A girth beaker decorated with bands of rouletting with plain band then a band of lattice, in **LNA1** fabric (EVE 2.4). This form is a variant of Cam 119a. See [Chap. 4.](#), Crem 1028. Date: AD 60/70–90/100.

MM08 Butt beaker with cordons on the shoulder and body in **BLB2** fabric (EVE 1.5). This form is a variant of Cam 113. Date: AD 50/60–80/90.

MM09 Girth beaker with incised vertical lines on the body, with single examples in ?BLB4, BLB1 and TRA fabrics (EVE 0.5). This form is a variant of Cam 119A. Date: AD 50/60–80/90.

MO01 Unclassified beaker in **BLB1** fabric only (EVE 0.1). Date: AD 50/60–80/90.

N. BEAKERS (including poppyhead)

This category has been based on size and decoration. There are a number of different forms, including poppyhead beakers. Beakers were made at a number of sites in north Kent and at Highgate. Folded beakers and conical-necked beakers were Mucking kiln products.

NA02 A neck-less globular beaker with indented roundels in micadusted fabric. A very similar vessel occurs in the kilns at Northgate House, London, <P127> (Seeley and Drummond-Murray 2005, 124, fig. 154). Date: AD 90–130/40.

NB01 Globular everted rim jar in **VRW** fabric (no examples in database). This form is unparalleled and therefore difficult to date; possibly second half of second century. See Mucking RB Cemetery III, Crem 1032 for illustration. Date: AD 150/60–200+.

ND01 High-shouldered everted rim beaker with rouletting on the body in **LNA1** fabric (EVE 0.7). In the working Type Series two distinct forms were shown as ND01. The second form was similar to the illustrated example, but had higher shoulders with no body decoration and a narrow base. Date: AD 50/60–110/20.

ND03 High-shouldered everted rim globular beaker with rouletting/incised bands on the body in **LNA1** fabric (EVE 2.7). In the working Type Series, this type was represented by seven different forms. Date: AD 50/60–110/20.

NE04 A neck-less jar/beaker in **LNA1** fabric (EVE 0.1). This form is similar to Marsh and Tyers II.H. Date: AD 50/60–110/20.

NF01 Flaring everted rim with cordons on the shoulder in **LNA1** fabric (EVE 1.3). Two totally separate forms were included in the working type series as NF01. Monaghan 4J1. Date: AD 50/60–110/20.

NG01 Everted rim beaker in **LNA1** (EVE 0.4). This is very similar to a form included in NF01. Date: AD 50/60–110/20.

NH03 Bag-shaped beaker with cornice rim. There were 11 different forms included in the working Type Series as NH03. There were a range of rim forms in both cornice rims and short everted rims. All examples had plain bodies, although some examples had grooves at the base of the rim. This type was produced in GRY, **LNA1** and LNA2 fabrics (EVE 4.2). Date: AD 70/80–120/30.

NJ01 Folded beaker with short everted rim in GRY and **LNB1** (EVE 0.3), as Marsh (1978) type 21. Date: AD 70/80–120/30.

NK: Poppyhead beakers.

NK03 Cornice rim bag beaker with barbotine dots grouped in diamonds or rectangular strips. In the working Type Series four different forms of bag beaker were included as NK03. These forms were produced in **LNA1** fabric (EVE 1.6). Date: AD 80/90–160.

NK06 Poppyhead beaker in **GFN** fabric, decorated with panels of barbotine dots (no examples in database). The rim is short and sharply everted. This is an unusual form of poppyhead beaker. It is rare in London; the form was produced at Highgate, but in small numbers. Marsh and Tyers 111.F.4. See Mucking RB Cemetery III, Crem 1014. Date AD 90/100–160.

NL03 Short, sharply everted rim globular poppyhead beaker in **LNA1** fabric (EVE 0.7). There is a groove on the upper part of the body, below which is a band of barbotine dots. See Marsh and Tyers Southwark III.E.1. Date: AD 80/90–160.

NM05 There were two distinct forms included in this type. The illustrated example is an everted rim beaker with a cordon at the base of the neck and bands of burnished lattice. However, the second form was a short everted rim poppyhead beaker. It is impossible to know which form was used as type NM05. This type was produced in **LNA1** fabric (EVE 1.0). Date: AD 90/100–160/70.

NM06 Bag-shaped poppyhead beaker with cordon at base of neck and flaring everted rim in GFN, **LNA1** and LNA2 fabrics (EVE 14.0). This is similar to Marsh and Tyers III.F.6. Date: AD 100–160.

NM07 Poppyhead beaker with everted rim in GRY and **LNA1** fabrics (EVE 5.4). This form is similar to fig. 9.65, Broomhey Farm, Cooling, Kent (Miles 2004, 328) See Mucking RB Cemetery II, Crem. 855. Date: AD 80/90–160.

NM09 Beaker with everted rim in LNA1 fabric (EVE 0.1). This is similar to Jones and Rodwell Type U (1973, fig. 10.118). The illustrated example may have been produced in the Mucking kilns. Date: AD 90/100–160/70.

NN06 A miniature poppyhead beaker in **LNA1** fabric (EVE 0.4). There appears to be no parallels for this form. Date: AD 80/90–160.
 NO01 Conical-necked globular beaker in **LNA1** fabric (EVE 0.7). Date: AD 80/90–150/60.
 NO08 A conical-necked globular beaker, a variant of NO01, in **LNA1** fabric (EVE 1.5). Date: AD 80/90–150/60.
 NP01 A funnel-necked beaker in GFNB and **GRY** fabrics (EVE 0.3). This form is a variant of fig. 13.109 Broomhey Farm, Cooling, Kent (Miles, 2004), where it occurs as kiln waste. See Monaghan 2C6.4, who dates this form AD 170–230. This form is also very similar to Cam 409. See also Mucking RB Cemetery 1, Grave 17 and RB Cemetery III, Crems 1079 and 1086b. Date: AD 200–300.
 NQ01 A globular beaker with a short funnel neck. This form was produced in GRY and **GRYS** fabrics (EVE 14.6). This beaker was a Mucking kiln product, Jones and Rodwell Type R (1973, fig. 10.101). This form is very similar to Cam 408. The form may be a variant of fig 13.110, Broomhey Farm, Cooling, Kent (Miles 2004, 334). Date: AD 110/20–200+.
 NQ10 Bifold rim in **BLB1** fabric (EVE 0.7). An unidentified form, which may represent a variant of NQ12. Date: AD 200–300+.
 NQ12 Upright bead rim funnel-necked beaker in **GRYS** fabric (EVE 1.2). Date: AD 200–300+.
 NR01 Everted rim folded beaker with variants in GRY and **GRYS** fabric (EVE 1.4). This form is Jones and Rodwell Type Q (1973, fig. 10.96). Date: AD 180/90–250.
 NS03 A cornice rim beaker in **LNA1** fabric (EVE 0.3). This may have been a Mucking kiln product. However, there are no exact parallels in Jones and Rodwell Interim Type Series. Date: AD 80/90–150/60.

O. BICONICAL. RANGE BETWEEN BOWL, BEAKER AND CUP

A small group of vessels that include three forms from cemeteries.

OA01 A flaring everted rim with rouletting on the shoulder and sharp biconical body. This form occurs in **LNA1** fabric (EVE 1.4). The form is similar to Fishbourne 69. Date: AD 50/60–90/100.

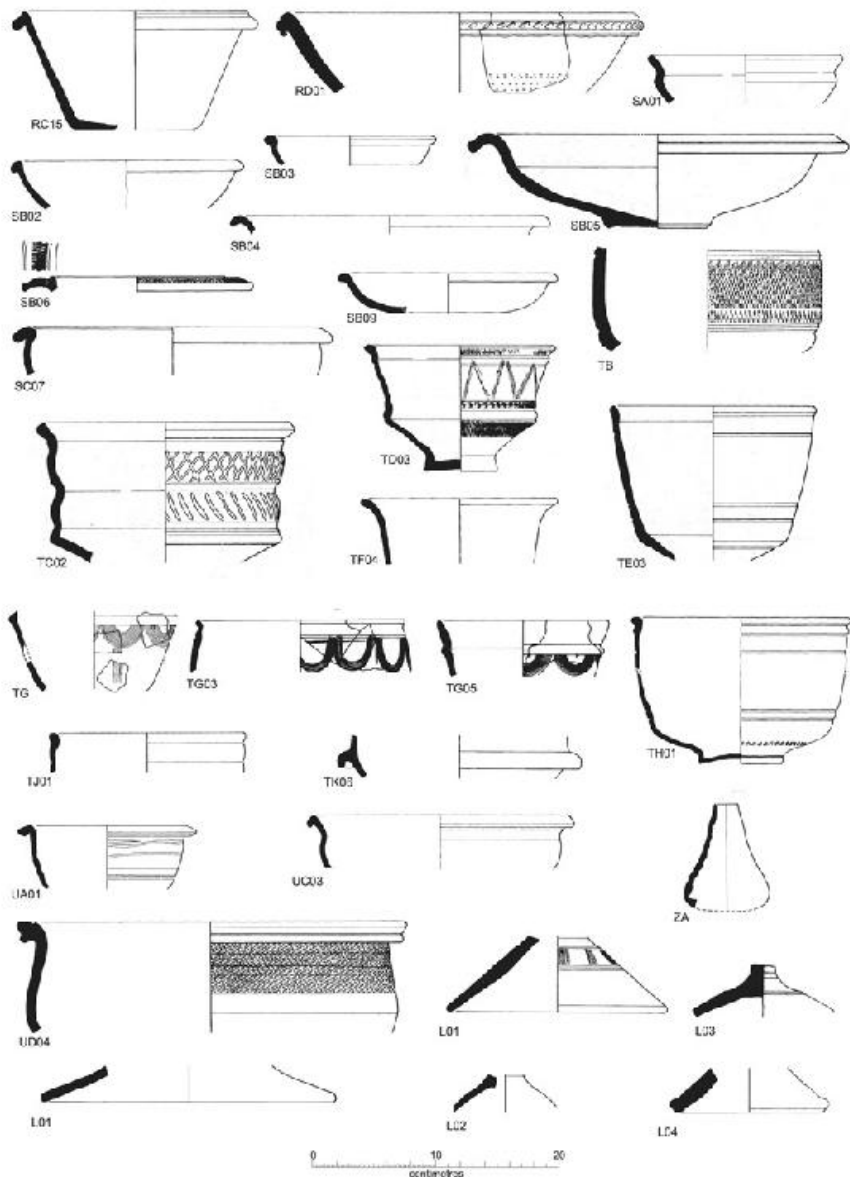


Figure 3.26. Pottery type series: R, S, T, U and Lid forms.

OB02 Carinated beaker in **GFN** fabric only (no examples in database). This form is a variant of Cam 120b. See Mucking RB Cemetery II Crem 905 for illustration. Date: AD 50–100/10.

OC02 A carinated cup/beaker in **LNA1** fabric (EVE 0.4). This form is similar to Cam 214Bc. Date: AD 50/60–90/100.

OD?? A carinated beaker. This is unlikely to have been a

Mucking kiln product (no examples in database). The incomplete profile does not allow a positive classification. The lower part of the vessel is very similar to Skeleton Green fig. 97.44 (Partridge 1981, 256) and is a variant of Cam 120a. See Mucking RB Cemetery II, Crem 891. Date: AD 50/60–100/10.

OD01 A wide-mouthed beaker/bowl (no examples in database). See Mucking RB Cemetery II, Crem 896. Date: AD 50/60–110/20.

OE01 A bowl with everted rim, or more probably a wide mouth jar. Wheeler 1930, fig. 56 no. 3. This form only occurs in **LNA1** fabric (EVE 0.2). Date: AD 80/90–150/60.

OF03 Squared everted rim wide-mouthed bowl/jar. This form occurs in **LNA1** and **GRY** fabrics (EVE 0.4). Date: AD 80/90–150/60.

P. CUPS – BELGIC SERIES

PA01 An outward curving carinated cup, a variant of Cam 210a in **BLB1** fabric (EVE 1.5). There is a cordon at the base of the neck. The profile is incomplete, although the upper part of the vessel resembles PB01. Date: AD 50/60–80/90.

PB01 This form of carinated cup/bowl closely resembles Cam 211, although the profile is incomplete. There are three evenly spaced cordons on the upper part of the body and a groove below the rim. The lower part of the vessel may be with/without a foot ring. The form occurs in **BLB1** fabric (EVE 0.9). Similar forms are known from Kelvedon and Lexden. This form occurs in both pre- and post-conquest contexts. It is most likely to occur in Claudian contexts. Date: AD 50/60–80/90.

PC01 A carinated cup/bowl, a possible variant of Cam 209. The working Type Series shows two very different variants of this form, therefore it is impossible to know whether both forms were included in the analysis of the pottery. The incomplete profile, which has body and base only, makes positive identification very difficult. The form only occurs in **BLB2** fabric (EVE 0.1). Date: AD 50/60–80/90.

PD An incomplete profile with neither rim nor base (EVE 0.0). It is a possible variant of Cam 215 and occurs in **BLB2** fabric only. Date: AD 50/60–80/90.

PE02 Flaring everted rim with carinated body; although an incomplete profile, it is most likely to be a variant of Cam 216 in **BLC1** fabric (EVE 0.2). Date: AD 50/60–80/90.

PF01 Short everted rim with groove at the base of the neck and a second groove at the maximum girth. An incomplete profile, but the nearest form is a variant of Cam 215. This

form occurs in **BLB1** fabric (EVE 0.2). Date: AD 50/60–80/90.
PG01 Imitation samian bowl, a variant of Drag 27 in **LNB1** fabric (EVE 0.6). Date: AD 50/60–80/90.
PH03 A beaker, possibly with a pedestal in **LNA1** fabric (EVE 0.3). This form is a variant of Cam 74a. This is unlikely to have been a Mucking kiln product. Date: AD 80/90–130/40.
PK01 This form is very similar to Thompson 2.2 and occurs in **BLB2** fabric only (EVE 0.1). Date: AD 50/60–80/90.

Q. DISHES

A range of shallow dishes, of various forms. Most in this category are non-Mucking products.

QA01 A shallow dish/platter with outward curving sides. This occurs in **BLB1** fabric (EVE 0.5). Date: AD 50/60–80/90.

QA02 A platter, which is a form variant between Cam 2a and 2b. This form occurs in **BLB1** fabric (EVE 0.8). The date range is pre- to post-conquest. This is unlikely to have been a Mucking kiln product. Date: AD 50/60–80/90.

QA03 This form is represented by the wall of the dish/platter. The base was missing, therefore it is difficult to assign a precise identification. However, it is closest to a variant of Cam 2. This form occurs in **BLB1** fabric (EVE 0.1). This form can occur in pre-conquest contexts, although, this is more likely to be post-conquest. This form is unlikely to be a Mucking kiln product. Date: AD 50/60–80/90.

QB01 Only one form of this type is illustrated here. The working Type Series had two variants very similar to Cam 12 illustrated. This type occurs in **BLA4** and **TRB** fabrics (EVE 0.8). A number of examples appear to be kiln waste and were probably manufactured in the Mucking kilns. As with the QA forms, this occurs both pre- and post-conquest. Date: AD 50/60–80/90.

QB02 This is a variant of Cam 26. The single sherd occurs in **TNB** fabric, although this is not true **TNB**, and may be kiln waste. Date: AD 50/60–80/90.

QC01 This platter is a variant of Cam 14 and Chelmsford A2 5.1 (Going 1987). This form occurs in **BLA4** fabric (EVE 0.5). There is no evidence to suggest that this form was produced in the Mucking kilns. Date: AD 50/60–80/90.

QC02 This dish/platter is a variant of Cam 28. There is no Chelmsford equivalent and there are no known parallels for this form from the Thames side production sites, although it is probable that it was produced at Mucking, or nearby. This

form occurs in BLA4 fabric (EVE 0.1). There is one example described as LNA1 fabric, although this is a misidentification of fabric. Date: AD 50/60–80/90.

QD01 This platter is a variant of Cam 26 and occurs in **BLB1** fabric only (EVE 0.2). There is no Chelmsford equivalent and it is rare in south Essex, although is a very common form in Kent in the later first century AD (see Thompson in Prehistory Vol.). This form is unlikely to have been a Mucking kiln product. Date: AD 50/60–80/90.

QE01 A dish with outward curving walls, the rim thickens to an upright bead. The nearest equivalent is Cam 17. This form occurs in a wide range of fabrics: BLA2, BLA4, **BLB1** and BLB2 (EVE 0.7). It is a variant of Jones and Rodwell Type A (1973, fig. 4 A1/A2). This form is a Mucking kiln product. Date: AD 70/80–120/30.

QE02 The example illustrated here is an incomplete profile and it could be either a dish, or a platter. The incurving wall of the dish is very similar to Jones and Rodwell Type A (1973, fig. 4 A3/A4). This form may be a variant of Cam 16 and Chelmsford A4 1.1. This form occurs in BLA1 and BLB2 fabrics (EVE 0.2). Date: AD 70/80–120/130.

QF01 Platter in TRB fabric (EVE 0.6). Date: AD 80/90–120/30.

R. DISHES AND BOWLS

This category includes both dishes and bowls.

RA01 Deep straight-sided bowl with internal ledge rim in **BLA2** fabric (EVE 0.4). Mucking Type A7 (Jones and Rodwell 1973). Date: AD 70/80–120/30.

RA02 Straight-sided deep dish with flattened rim in BLA3, **BLA4** and TRB fabrics (EVE 3.4). See Colchester Pit 1 (Hawkes and Hull 1947, fig. 55 no. 32). See also Greenhithe No. 98 (Detsicas 1966). A variant has decoration on the rim. See Highgate kiln 10, phase 2 no. 36 (variant; Brown and Sheldon 1974). The working Type Series included four very different forms. These were non-Mucking products. Date: AD 70/80–120/30.

RA05 Bead rim with groove below rim and slight curved side in **BLA3** fabric (EVE 0.1). Similar to Jones and Rodwell 1973 Type B.13. This is also similar to fig. 13.1 The Mount Roman Villa, Maidstone (Kelly 1992). Date: AD 70/80–120/30.

RA13 Squared bead rim deep bowl in **BLA1** fabric (EVE 0.1). A very rare form at Southwark, North Kent and Essex. This is similar to Chelmsford B8.1.2. A very similar example occurs at 201–11 Borough High Street, Southwark (Ferretti and Graham 1978, fig. 31.33). See also Marsh and Tyers 1.V.K. This is a non-Mucking product. Date: AD 70/80–120/30.

RB03 Plain and decorated straight-sided dish, a variant of Jones and Rodwell Type A. Some examples were decorated with a burnished wavy line on the body and some examples have a chamfered base. This decoration occurs on examples from Palmers Girls' School (Rodwell 1983). See also Marsh and Tyers 1V.J.2. At Southwark this form occurs in a **BB2** fabric, where the date range is given as AD 120/30+. This type was produced in **BBT2**, **BLB1**, **GRY** and **GRYS** fabrics (EVE 35.3). The working type series included eight variants as type RB03. The diverse forms included decorated and plain vessels. This is a Mucking kiln product. Examples occur in Wells 4 and 6, also in Cemetery II, Crem 911. Date: AD 110/20–250/300.

RB04 Slightly incurved sides with bead and groove rim in **BBT2**, **GRY** and **GRYS** fabrics (EVE 12.3). A wide range of dishes were included in this type. The published type series includes three examples of RB04. Examples include both burnished wavy lines and burnished lattice on the body. There is also a wide range of rim diameters; see Crem. 1085. It should be noted that this group should have been subdivided and that, included in this category, are some vessels that are not strictly dishes but bowls. Date: AD 110/20–250/300.

RB04.1 A shallow dish with triangular bead rim, a groove below the rim and a burnished wavy line on the body with a chamfered base.

RB04.2 A straight-sided deep dish with groove below the rim and a slight chamfered base and plain body. Similar to Mucking Type A.6.

RB04.3 A variant of Jones and Rodwell 1973 Type A.4. This form has a marked outward curvature of the wall. There is a wide shallow groove below the rim, a burnished wavy line on the body and a chamfered base. This form was produced at Mucking and probably Palmers Girls' School. Monaghan type 5F3. Date: AD 170/90–230.

RB05 This type includes 14 variants of bead rim dishes/bowls. Some forms should have been included with RB06. The two illustrations in the Type Series reflect the diversity of this category. Plain slight curved wall with chamfered base also

burnished lattice in **BBT2**, GRY and GRYS fabrics (EVE 17.4). Monaghan type 5D. Most are Mucking products. Date: AD 110/20–170/80.

RB06 Dish – as RB05 – with burnished lattice in **BBT2**, GRY and GRYS fabrics (EVE 10.8). There are a number of variations (strictly should be subdivided) but a range of bowls and dishes with different fabrics have been included. Most forms in this group are Mucking kiln products. Date: AD 110/20–170/80.

RB07 A bead rim dish, variant of RB06. This form occurs with both acute and obtuse burnished lattice; some examples have a slight groove below the rim and a chamfered base. This is a variant of a common form occurring on most sites. This form was produced in **BBT2**, GRY and GRYS fabrics (EVE 3.3). Date: AD 110/20–170/80.

RC04 Straight-sided dish with groove below the rim, with vestigial chamfer in **GRYS** fabric (EVE 3.2). This was a Mucking kiln product, Jones and Rodwell Type A (1973, fig. 4.6). Date: AD 130/40–230/300.

RC05 A bead rim bowl in **BBT2**, GRY and **GRYS** fabrics (EVE 5.5). This was a Mucking kiln product, Jones and Rodwell Type B (1973, fig. 4.14). Date: AD 110/20–170/80.

RC06 A triangular bead rim bowl in **GRYS** fabric (EVE 3.0). This was a Mucking kiln product and appears to be a variant of Jones and Rodwell Type B. Date: AD 110/20–170/80.

RC07 A deep bowl with triangular bead rim, which may be plain, or have a burnished lattice decoration. Some rims have a slight undercut groove. This form was produced in GRY and **GRYS** fabrics (EVE 1.1). This was a Mucking kiln product, Jones and Rodwell Type B (1973, fig. 4.14). Date: AD 110/20–170/80.

RC09 An incipient flanged bowl in GRY and **GRYS** fabrics (EVE 2.5). This form is likely to be a Mucking kiln product and is a variant of Jones and Rodwell Type C (1973, fig. 4.19). Date: AD 180/90–230/50.

RC10 A flanged bowl in GRY and **GRYS** fabrics (EVE 4.9). This form is likely to be a Mucking kiln product, a variant of Jones and Rodwell Type D (1973, fig. 4.19). This is similar to Cam 305, which is a developed flanged bowl. See Mucking RB Cemetery Ib, Grave 61. Date: AD 200/40–320/50.

RC12 An incipient flanged bowl in **BBT2** and **GRY** fabrics (EVE 1.8). This is similar to Jones and Rodwell Type C (1973, fig. 4.15). Date: AD 180/90–230/50.

RC13 A deep bowl with incurving sides in **GRY** fabric (EVE

0.2). Date: AD 110/20–170/80.

RC15 A flanged bowl in **GRY** fabric (EVE 1.4). This form is a variant of Jones and Rodwell Type D (1973, fig. 4.19) and is similar to Cam 305. Date: AD 200/40–320/50.

RD01 A dish with triangular or rounded rims (Southwark forms IVH2 and IVH7). This form was produced in BBT2, BLB2, GFNB, **GRY**, GRYs, GVC and NSP fabrics (EVE 24.7). It may have been a Mucking kiln product. Date: AD 110/20–70/80.

S. BOWLS (SHALLOW WITH CURVED WALLS)

This category includes imitation samian forms.

SA01 A bowl with rounded shoulder in **BLB1** and **BLB2** fabrics (EVE 0.3). This form is similar to Cam 249b. This form is unlikely to have been produced in the Mucking kilns. Date: AD 50/60–80/90.

SB02 A shallow dish with curved wall in **LNA1** fabric (EVE 2.9). Some examples of this form have a slight foot ring on the base. It is unlikely that this was a Mucking product. This may be a variant of Highgate Wood fig. 2.13 (Brown and Sheldon 1969, 63). See Mucking RB Cemetery IV, Crem 1079. Date: AD 80/90–160.

SB03 A flattened bead rim bowl/dish in **LNA1** fabric (EVE 0.6). Due the fragmentary profile it is difficult to make a positive classification of this form. However, this may be an imitation Drag 27. Date: AD 80/90–160.

SB04 Rim fragment only of a hooked rim in **LNA1**, **LNB1** and **LNB2** fabrics (EVE 0.2). The example is too fragmentary to give a positive identification. Date: AD 80/90–160.

SB05 A shallow dish in **LNA1**, **LNB1** and **LNB2** fabrics (EVE 2.0). This form is a variant imitation samian, Drag 36. Date: AD 80/90–160.

SB06 A beaded flange plate with incised or rouletted decoration on the rim. Some examples have foot ring base. This form was produced in **LNA1** fabric (EVE 1.9). The example was probably produced in London, see Marsh and Tyers V.C.1. Date: AD 80/90–130.

SB09 A shallow dish with triangular rim in **LNA1** fabric (EVE 0.8). This form is a variant of Highgate Wood fig. 2.13 (Brown and Sheldon 1969, 63). Date: AD 80/90–160.

SC07 A bowl with curved upper wall and rounded base with folded over rim in **LNA1** fabric (EVE 1.3). This form was

produced at Highgate Wood. There is no evidence to suggest that this form was produced in the Mucking kilns. This form is similar to Marsh and Tyers IV.F.4. At Highgate this form is dated to AD 85–140. Date: AD 80/90–130/40.

T. BOWLS/CUPS

This category includes bowls and cups, including some London Ware forms.

TC02 A deep bowl similar to Cam 68, which was a copy of a Drag 29. The working Type Series had two very different forms and it is therefore impossible to determine which form is TC02. The illustrated form is rare. The body decoration includes incised lines and incised lattice. This form was produced in **GFN** fabric (EVE 1.0). Date: AD 50/60–90/100.

TD03 A deep bowl, a variant of TC02. This form was produced in **LNB1** fabric (EVE 0.0). Date: AD 50/60–80/90.

TE03 A deep bowl/cup in **LNA1** and **LNB1** fabrics (EVE 1.2). The body can be plain or decorated with grooves. Date: AD 80/90–160.

TF04 A deep bowl with flaring rim produced in **LNA1** and **LNB1** fabrics (EVE 1.8). ?Colchester Type (Hull 1958 figs. 23 & 43). The working Type Series had a number of variants of this form. Date: AD 80/90–160.

TG: London Ware

London Ware occurs on a number of sites in London, for example at Northgate House and Copt Hall Close.

TG03 Deep bowl decorated with compass formed incised semicircles and grooves radiating out in **LNA1** fabric (EVE 0.1). Date: AD 80/90–160/70.

TG05 Decorated with incised semi-circles with various rims – see Walbrook 4. As TG03 in **LNA1** fabric (EVE 0.2). Date: AD 80/90–160/70.

TH01 Deep bowl imitation Drag 37, produced in **LNA1** fabric (EVE 0.1). This group also includes other decorated forms. See Mucking RB Cemetery II, Crem 902. Date: AD 80/90–160.

TJ01 A deep bowl with an upright bead rim and large cordon below the rim. This form was produced in **FLA2** and ?**FLA3** fabrics (EVE 0.4). This form was produced at Highgate Wood. Date: AD 50/60–80/90.

TK06 A body sherd only of a bowl, imitation Drag 38, in **LNA1** fabric (EVE 0.0). Date: AD 80/90–160.

U. BOWLS/JARS

UA01 A deep hemispherical bowl with flat down turned rim

produced in **BLA1** and **NSP** fabrics (EVE 0.4). This is very similar to Marsh & Tyers 1V.A.3. At Southwark this form is rare and is dated between AD 80 and 110. Date: AD 70/80–110/20.

UC03 A bowl in **LNA1** and NSP fabrics (EVE 0.4). Date: AD 80/90–160.

UD04 A deep bowl/wide mouth jar with bifid rim and rouletting on the body. This form was produced in **GVC** fabric only (EVE 0.0). Date: AD 180/90–250 +

Z. MISCELLANEOUS

ZA Unguentarium. A number of examples with, or without, a pedestal base occur in London. The illustrated example has a flat base (although there are no examples in the database). The date range is difficult to determine, although the form would appear to start from AD 50.

ZB Cheese press/colander base in **GRY** fabric (EVE 0.2; not illus.). This is similar to Cam 199. Date: AD 60/70–160/70 +.

ZC Tazza. In London this form is dated between AD 50 and 250. The Verulamium White Ware Tazze have frilled decoration. However, the products from Northgate House have rouletting and are in coarse white slip ware. The three examples from Mucking are in a buff fabric, but the form is unlike either kiln product from London. Tazze usually occur in cemeteries or with a religious association. Although they are often referred to as incense burners, their exact function is unclear. The three examples from Mucking occur in Cemetery II, Cremation 911.

Four lid types (L01–04) are also illustrated.

Updated Fabric Series

In this revised fabric series, the fabrics present at Mucking are described and quantified, with referencing to other fabric series and indications as to date range.

ALICE HOLT GREY WARE (AHW)

Description: Chelmsford Fabric 43 (Lyne & Jefferies 1979, 18), NRFR code ALH RE

Date: Mid to late fourth century +

Forms: Jars

Occurrence: No definite identifications were made at Mucking, but three possible sherds (of jars or storage jar) from the surface of earlier features, totalling EVE 0.1.

BLACK BURNISHED 2 TYPE (BBT2)

Description: Chelmsford Fabric 41 (Gillam 1970; Farrar 1973, 97–101; Williams 1977, 180, 195–6), NRFRC codes COL BB 2, MUC BB 2, CLI BB 2 and COO BB 2

Date: Early second to mid third century

Forms: Bowls (RA02, RC02, RC10, RC12, RC13, RC14 & RC15), dishes (RB03, RB04, RB05, RB07, RC01, RC04, RC05, RC06 & RD01), ?jars (but only EA01 is represented by more than a handful of sherds)

Occurrence: Large amounts of Black burnished 2 type were found at Mucking: 2168 sherds (EVE 39.6). The forms are distributed differently across the site, with simpler dishes and bowls RB03, RB04, RB05, RB06, RB07 and RC04, RC05, RC06 found largely in the area of the Central Enclosure and incipient flanged and flanged bowls (RC12+), frilled bowls (RD01) and all of the jar sherds in the area of the Southern Enclosures and RBI. It may be that this represents a chronological difference, rather than a functional one. While this ware is dated at Chelmsford from the start of the third century (Going 1987, 8), it is seen in contexts dated c. AD 125/30 at Southwark (Marsh & Tyers 1978, 575–7). Its occurrence in the mid to later second-century burnt fill of Well 4 (883 sherds, EVE 13.39, comprised solely of dishes of forms RB03–7, many of which were recorded as burnt) would confirm this earlier dating. The similarity of many of the simple dish and bowl forms produced to Mucking grey ware kiln products might also suggest that some BBT2 vessels were produced at Mucking, although only seven sherds were associated with a kiln (Kiln 1, one of which was found under the firebars; this is a kiln that is otherwise associated with the production of ledge-rimmed jars in shell-tempered fabrics).

BLACK EGGSHELL WARE (EGS)

Description: Chelmsford Fabric 23 (Marsh 1978, 129), NRFRC code GAB TN 2

Date: Late first to early second century AD

Forms: Beakers

Occurrence: Just 39 sherds (EVE 0.22) were recovered from Well 4 (below the burnt deposit) and ditches of the Central Enclosure.

BROCKLEY HILL WARE (BH)

Description: Chelmsford Fabric 26 (Green 1980, 49), NRFRC code VER WH

Date: Mid first to mid/late second century AD

Forms: Flagons

Occurrence: A total of 530 sherds (EVE 4.51) were recovered from

Kiln 14 (90 sherds) and a range of features throughout the Central and Western Enclosures, including 46 from the burnt and other fills of Well 4.

CÉRAMIQUE À L'ÉPONGE (ALP)

Description: Chelmsford Fabric 22 (Fulford 1977, 45–6), NCFRC code EPO MA

Date: Mid to late fourth century +

Forms: Bowls (R02, R06), flagon (R10)

Occurrence: All 28 sherds (EVE 0.39) were recovered from ditches and *Grubenhäuser* in the southern part of the site. Noted as rare in Essex, with Mucking the exception (Going 1987, 6).

COLCHESTER BUFF WARE (FLC)

Description: Chelmsford Fabric 27 (Hull 1963b, 107–8), NRFRC code COL WH

Date: Mid first to early third century

Forms: Flagons (LB02, LE01)

Occurrence: A total of 948 sherds (EVE 2.36), 270 (EVE 0.0) of which were from the Well 4 burnt deposit.

COLCHESTER COLOUR-COATED WARE (CLC)

Description: Chelmsford Fabric 1 (Anderson 1980, 35; Green 1980, 72), NRFRC code COL CC2,

Date: Mid second to mid third century

Forms: Beakers (Cam 391, Cam 392, Cam 395, Cam 396, Cam 406, Cam 407, Cam 409, Cam 411), Bowl (C308)

Occurrence: The majority of the 197 sherds (EVE 2.91) are from Well 4 and nearby ditches of the Central Enclosure (most of these are Cam 391 where identified); 42 sherds (EVE 0.25), many of less certain fabric identification, and including the potentially later beaker forms Cam 395, Cam 406, Cam 407, Cam 409 and Cam 411, were from a range of features in the Southern and Western Enclosures, including RBI, RBII, Well 2, Well 6 and three *Grubenhäuser*.

EARLY SHELL-TEMPERED WARE (BLA)

Description: Chelmsford Fabric 50 (Green 1980, 65)

Date: Early first century AD to early second century AD
Forms: Beakers (MA01, MA04, ME01, ME05, ME08, NM06), buckets (JC01, JC02 & JC04), dishes (RA01, RA02, RA05, RA13, RB04, RB05, RB06, UA01), jars (AA01, AB02, AB03, AB04, AB05, AB06, AB07, AB08, AC05, AC06, AC08, AD05, AE05, BA01, BB02, BC01, BC02, BC03, CA01, CC01, CC02, CC04, CH03, CJ04, DA01, DA02, DB01, DB02, DB03, DB05, DB07, DB08, DC01, DD04, DD09, GA01, JA01 & JB02) platters (QA01, QB01, QC01 & QE01), storage jars (JA01, JA03, JA06,

JB02, JB04, JB05 & JB08)

Occurrence: One of the major Mucking fabrics, with 35,914 sherds (EVE 321.7). There is strong evidence that dishes and jars of various forms were being produced in Kilns 1, 4 and 6, and that ledge-rimmed jars were being produced in many of the smaller kilns. This fabric is transitional between the grog-tempered wares, and the later grey wares, with some of the same forms being produced.

EAST GAULISH RHENISH WARE (EG)

Description: Chelmsford Fabric 9 (Symonds 1992), NRFRC code MOS BS

Date: Later second to mid third century

Forms: Beakers (no forms given)

Occurrence: Just 12 sherds (EVE 0.0), scattered across the centre of the site, usually in upper fills of ditches.

FINE GREY WARES (GFN, GFNS)

Description: Chelmsford Fabric 39

Date: Mid first to late fourth century

Forms: Beakers (NH03, NM06 & NQ01), bowls (SB02 & TC02), dishes (RD01), flasks (KA01, KB01 & KB02) jars (AC09, CC04, EA01, EA02 & FA05)

Occurrence: A total of 1707 sherds (EVE 31.34) from across the site. There is, however, no evidence that these were Mucking kiln products, except for a handful of sherds from Kiln 22.

GROG-TEMPERED FABRICS (BLB, BLC)

Description: Chelmsford Fabric 53 (Thompson 1982, 20), NCFRC code SOB GT

Date: Late first century BC to mid first century AD
Forms: Beakers (MA01, MA04, MB01, ME01, ME04, ME05, ME06, ME08, MH03, MH04, MH08, MK08, MM08, MM09, MP01 & NQ10), bowls (SA01), cups (PA01, PB01 & PF01), dishes (RB03, RB07 & RD01), jars (AA01, AB02, AB03, AB04, AB05, AB06, AB07, AC09, AD03, AD05, AF05, CA01, CB01, CC01, CC02, CC03, CC04, CE01, CF01, CG01, CG03, CG04, CH03, CJ04, CK01, CM01, CN01, CQ08, CR01, DA01, DB01, DB03, DB08, EA01, EA02, EA03, FA05, GC01 & JB04), platters (QA01, QA02 & QE01), storage jars (JA04, JB02 & JB06)

Occurrence: A total of 19,654 sherds (EVE 138.1) from across the site. There is some evidence for manufacture of some of the later forms in Kilns 1, 4 and 6, and in some of the earlier kilns. Although dating from other sites suggests this fabric ceases in the mid first century AD (Going 1987, 10), its use for forms otherwise produced in the grey ware kilns at Mucking suggests a longer life-span here, perhaps to the end of the first century AD.

FLINT-GRITTED (FG)

Description: Probably later Iron Age fabric

Date: Mid first century BC to mid first century AD Forms: Jars (AB05, AB06, AC09 & ZE01), storage jars (forms not certain)

Occurrence: A total of 271 sherds (EVE 4.21) recorded within the Romano-British pottery assemblage, although many are noted as being hand-made. Their distribution primarily in the ditches of the Western Enclosures suggests these are probably later Iron Age products.

FRENCH IMPORT (FRE)

Description: Probably North Gaulish grey ware, NRFRC code NOG RE

Date: Later first to third century

Forms: Flasks (no forms given)

Occurrence: A total of 58 sherds (EVE 0.34), mainly from the Central Enclosure ditches. Presence of this ware at Mucking would fit with its primarily coastal distribution.

HADHAM OXIDISED WARE (MHA, MHB)

Description: Chelmsford Fabric 4 (Harden & Green 1978, 170, 174, n6), NRFRC code HAD OX

Date: Mid third to late fourth century +

Forms: No form codes are given, but beakers, bowls, cups, dishes, flagons, flasks and jars are recorded

Occurrence: With 590 sherds (EVE 4.07), this is the largest group of non-local later pottery at Mucking. Decoration, in the form of dimples, bosses, rouletting, cordons, grooves and combing is present, with two vessels (one from GH8) bearing stamped decoration. The upper fills of Well 6 (probably later third century in date) produced 24 of these sherds, while a further 50 were recovered from the ditches of the Central Enclosure; these were all largely undecorated. The bulk, however, including the majority of the decorated sherds, was found in the southern part of the site. These wares become common at Chelmsford in the later fourth century (Going 1987, 3), although they reached Elms Farm, Heybridge in the mid third century, and continued there until the end of the Roman period with no notable change in volume.

HIGHGATE GREY WARE (HG)

Description: Chelmsford Fabric 37 (Brown & Sheldon 1969, 63–4), NRFRC code HGW RE C

Date: Late first to late second century AD (Davies *et al.* 1994, 82)

Forms: Beakers (NM05), flasks (form not given)

Occurrence: A total of 39 sherds (EVE 0.2), from Well 4, RBI and the

Western Enclosures.

?LOCAL MICA-DUSTED FINE WARES (MG)

Description: Chelmsford Fabric 12 (Marsh 1978, 122–3)

Date: Mid first to early second century AD

Forms: Jars (EA01 & NK03), beakers (ME01 & MH03)

Occurrence: A total of 60 sherds (EVE 0.84) were recovered from RBI and the Southern Enclosures, with 15 sherds from the North Enclosure. Possibly a Colchester product (Going 1987, 5).

LATE SHELL-TEMPERED WARE (LST)

Description: Chelmsford Fabric 51 (Sanders 1973), NRFRC code ROB SH

Date: Mid to late fourth century +

Forms: Jars (FA01 & FA05) though this may be misidentification of form, as these are grey ware forms

Occurrence: Just 24 sherds (EVE 0.51) were recovered, from later contexts in the southern part of the site.

LONDON-TYPE WARE (LNA)

Description: Chelmsford Fabric 33 (Marsh 1978), NRFRC code LON FR

Date: Late first to mid second century AD

Forms: Beakers (ML08, ML09, MM07, ND01, ND03, NE04, NF01, NG01, NH03, NJ01, NK03, NL03, NM01, NM05, NM06, NM07, NM09, NN06, NO01, NO03, NO08, NS03, OA01, OC01, OC02, bowls (OE01, OF03, PG01, SB02, SB03, SB04, SB05, SB06, SB09, SC07, TB02, TD03, TE03, TF04, TG03, TG05, TH01, TK06, TL01 & UC03), cups (PH03), flasks (KA01), jars (FB01).

Occurrence: A total of 4717 sherds (EVE 55.59) were recovered, with a substantial proportion (1662 sherds, EVE 25.93) coming from the burnt fill of Well 4. This may have been a Mucking product, as small numbers of sherds were recovered from Kiln 1 (all of form NM07), with some from under the firebars. The ware is mainly distributed in and around the Central Enclosure, with a further concentration around RBI and RBII, possibly associated with the kilns in that area.

LOWER RHINELAND FABRIC 1 (KOLN)

Description: Chelmsford Fabric 6 (Anderson 1980, 14), NRFRC code KOL CC

Date: Early to mid second century AD

Forms: Beakers

Occurrence: Although not listed in the original Mucking fabric series, 151 sherds (EVE 2.05) were listed in the database, mainly clustered around Well 4, with 16 sherds (mainly ?KOLN) in the area of the Banjo enclosures. Anderson dated these sherds to the late first or early

second century AD during post-excavation.

LYON COLOUR-COATED WARE (LY)

Description: Chelmsford Fabric 5 (Greene 1979, 13–42), NRFRC code LYO CC

Date: Mid to late first century AD

Forms: Beaker (no form codes given)

Occurrence: Just five sherds (EVE 0.33), both of beakers with similar decoration, from the surface of Well 4 and a ditch close by. These were identified by Anne Anderson during post-excavation as pre-Flavian.

MAYEN WARE/EIFELKERAMIK (MN)

Description: Chelmsford Fabric 54 (Gose 1950; Fulford & Bird 1975, 171–3), NRFRC code MAY CO

Date: Late fourth century +

Forms: Jars (no form codes given)

Occurrence: Just seven sherds (EVE 0.25), five of which were recovered from Kiln 14, along with a large and curious assemblage of mixed early and late wares.

NENE VALLEY COLOUR-COATED WARE (NVA, NVB, NVC, NVD)

Description: Chelmsford Fabric 2 (Anderson 1980, 34; Howe *et al.* 1980), NRFRC code LNV CC

Date: Early third to late fourth century

Forms: Beakers (NV26, NV27, NV30, NV32, NV34, NV40, NV42, NV43, NV45, NV48, NV49, NV50, NV52, NV54 & NV55), bowls (NV79, NV80, NV82 & NV83), castor boxes (NV89), dishes (NV87), flagons (NV63 & NV66)

Occurrence: With a total of 393 sherds (EVE 4.0), this represents the second-largest group of late non-local pottery at Mucking, after Hadham oxidised ware. Aside from a group of 16 beaker sherds from PG71 (all form NV43 where identified), and of 45 sherds from the Central Enclosure ditches (forms NV30, NV40 & NV45), other sherds come from late fills of features in the southern part of the site, or from later Anglo-Saxon contexts (including 51 sherds from *Grubenhäuser*). Although manufacture of these wares is documented from the second century AD, at Elms Farm, Heybridge the main phase of importation was in the second half of the fourth century, and the pattern is similar at Chelmsford (Going 1987, 3).

OXFORDSHIRE PARCHMENT WARE (PMT)

Description: Chelmsford Fabric 30 (Young 1977, 81), NRFRC code OXF PA

Date: Late fourth century +

Forms: Bowls (?P14, P24 & P54), jar (P09)

Occurrence: A total of 57 sherds (EVE 0.63) were mainly recovered from typically late contexts in the southern part of the site, with seven body and base sherds from the upper fill of Well 6, which is dated to the later third century. As at Elms Farm, Heybridge, the carinated bowl form P24 was the most common.

OXFORDSHIRE RED COLOUR-COATED WARE (ROX)

Description: Chelmsford Fabric 3 (Young 1977, 123), NRFRC code OXF RS

Date: Mid to late fourth century +

Forms: Beakers (C23, C27, C30, C36, C37, C38 & C39), bowls (C40, C45, C48, C49, C50, C51, C52, C55, C56, C68, C70, C73, C75, C77, C81, C83, C84, C86 & C93), flagons (C02, C04 & C08), jug (C14)

Occurrence: A total of 501 sherds (EVE 8.01) were recovered, largely from later contexts in the southern part of the site (101 sherds from *Grubenhäuser*), although a broad scatter of 41 sherds (several recorded as being very abraded) was recovered from the upper fills of Central Enclosure ditches. This is a fabric well documented as appearing late in Essex (Going 1987, 3), and is mostly found at Elms Farm, Heybridge in contexts of mid fourth century and later.

PORTCHESTER D (TILFORD/OVERWEY) WARE (POD)

Description: NRFRC code OVW WH (Fulford 1975; Lyne & Jefferies 1979)

Date: Late fourth century +

Forms: Jars (forms not given, but presumably rilled jar form 137)

Occurrence: A total of 195 sherds (EVE 1.92) from *Grubenhäuser* and upper fills of ditches in the southern part of the site.

RETTENDON-TYPE WARE (RETT)

Description: Chelmsford Fabric 48 (Going 1987, 10, Drury 1976, Tildesley 1971)

Date: Late third to late fourth century

Forms: Body sherds and base only

Occurrence: Only 18 sherds were recovered (EVE 0.0), from RBII and other features in the southern part of the site.

'RHENISH' TYPE COLOUR-COATED WARES (MV)

Description: Chelmsford Fabric 8 and 9 (Greene 1978), NRFRC code CNG CC1, CNG CC2

Date: Later second to mid third century

Forms: Beakers

Occurrence: A total of 75 sherds (EVE 0.36), largely from the Southern Enclosures, including RBII and the Kiln Ditch, plus from several

Grubenhäuser (i.e. similar depositional patterns to many of the later Romano-British pottery sherds at the site, so possibly residual or curated as at Elms Farm, Heybridge; at Colchester, they appear in contexts of third-century date and later: Symonds and Wade 1999, 275).

SANDY GREY WARES (GRY, GRYS, NSP)

Description: Chelmsford Fabric 47

Date: Early/mid first to late fourth century +

Forms: Beakers (NH03, NM06, NM07, NP01, NQ01, NQ12 & NR01), bowls (OF03, RC10, RC12, RC13, RC15 & RD01), colanders (ZG01 & ZG03), cheese-press (ZG), dishes (RB03, RB04, RB05, RB06, RB07, RC04, RC05, RC06, RC07 & RC09), flagons (LC01 & LD02), flasks (KA01 & KA03), jars (AB04, AB05, AB06, AB07, AC08, AC09, DA01, DB01, DB03, DC01, EA01, EA02, EA03, EB02, EB03, EB05, ED06, FA01, FA02, FA03, FA05, FA06, FB01, GA01, GC01, GC02, GC04, GC05, GC06, GC07, GC09, HA01, HA03 & HC01), platters (QE01), storage jars (JB02, JB04, JB05, JB09 & JD05)

Occurrence: The grey wares represent the dominant fabric at Mucking, with 52,684 sherds (EVE 996.3). Kiln products (where substantial numbers of sherds of a particular form were directly associated with the kiln) would appear to be: NQ01 in GRYS in Kilns 3, 4 and 5; RB03 and RB04 in GRYS in Kilns 4 and 5; RB06 in GRY in Kiln 6; RC04 in GRYS in Kiln 4; KA01 and KA03 in GRYS in Kiln 4; AB07 in GRY in Kiln 6; AC08 in GRYS in Kilns 3, 4 and 5; EA01, EA02, EB02, EB03 and EB05 in GRYS in Kiln 6; ED06 in GRYS in Kiln 4; FA01, FA03 in GRY in Kilns 3, 4 and 5; GC01 and GC06 in GRYS in Kiln 4; GC04 in GRYS in Kilns 4 and 5; HA01 in GRYS in Kilns 3, 4 and 5; JB05 in GRY and GRYS in Kilns 4 and 5.

Kilns 3, 4, 5 and 6 would all seem to have been producing both slipped and unslipped grey wares (at least at the time of their final firing), whereas Kiln 1 produced no obvious grey ware forms, and presumably pre-dated the grey ware kilns. At Chelmsford, these grey ware fabrics replace the Romanizing grey wares (Chelmsford Fabric 45) by the mid second century (Going 1987, 9), which would match the proposed replacement of the BLA/BLB fabrics by GRY fabrics at Mucking during the first part of the second century. Potentially later forms include the developed flanged bowls (RC10+), the upright funnel neck beaker (NQ12) and the everted rim jar (ED06), but these are a minor part of the overall grey ware assemblage (at EVE 20.01).

TERRA NIGRA (TNA, TNB)

Description: NRFRC code GAB TN 1 (Hawkes & Hull 1947; Rigby

1985)

Date: First half of first century AD

Forms: Platters: Cam 14 (QB02), OA01; Cup/bowl: Cam 58

Occurrence: Just four sherds of *Terra Nigra* were identified (EVE 0.1): one platter from the burnt second-century fill of Well 4, and another platter and two cup/bowls from the surface of the Banjo enclosures. All but the Banjo platter were identified during post-excavation as real *Terra Nigra* by Val Rigby; imitations of *Terra Nigra* were made at Colchester, and other sites in East Anglia (Symonds & Wade 1999, 212), and the Banjo platter was identified by Rigby as a Colchester product dating to c. AD 45–65. None were stamped.

TERRA RUBRA (TR1A, TR1C)

Description: NRRFC code GAB TR 1A, GAB TR 1C

Date: Late first century BC to mid first century AD Forms: Beakers (Cam 76 & Cam 112)

Occurrence: Only 14 sherds (EVE 0.24). The Cam 76 beaker must have been old when deposited in three adjacent spits in Well 4, with the other sherds coming from the Western Enclosures.

TERRA RUBRA COPY (TRA, TRB)

Description: Probably a local fabric, possibly later Iron Age Date: Early first to later first century AD

Forms: Beakers (MK08 & MM09), cup (PB01), dish (RA02), jars (BC02, CQ08, DA01, DB03 & GB03), platters (QB01 & QF01)

Occurrence: A total of 1074 sherds (EVE 9.32), largely from the Western Enclosures, with strong representation in smaller Kilns 11, 19 and 22, which may have been producing this ware.

The kilns at Mucking clearly represent a major source of pottery for the Thames-side region, although imported wares are also present. The kilns and their products will be considered first, before turning to other wares present at the site.

The Mucking kilns can be divided into three distinct groups based on design: elongated structures with a small stoke pit, small oval kilns and the large conventional kilns. It is difficult to determine whether these divisions were sequential or simultaneous. It is

equally difficult to determine the kiln products. The interim report on the kilns and their products, Jones and Rodwell (1973), attempted to establish a type series and fabric series based on the contents of Kilns 2 and 3, with some reference to Kilns 4, 5 and 6. (Table 3.7 offers a correspondence between the Jones and Rodwell type series, that of MPX, and of other commonly used regional type series.) Jones and Rodwell (1973) noted that only the pottery from Kilns 2 and 3 had at that point been catalogued (although this data was not transferred into the later MPX computer records). The quantification was based on sherd counts, which clearly gives a distorted picture of the pottery found. The rims were sorted according to form into 21 types with each type further subdivided (Tables 3.8 and 3.9). A further quantitative analysis was made by grouping pottery of similar classes and fabrics. However, there is no clear description of the fabrics used.

An initial decision was made by MPX not to further process the material from Kiln 2, as it was felt that it had already been adequately analysed. Subsequently this material was examined with material from the other kilns. However, this was done manually (by Rosemary Jefferies), but was not included in the computer programme. The quantification was by fabric, form, weight and EVEs.

The type series established by MPX in the late 1970s and early 1980s for the whole site was not initially based on the Jones and Rodwell report (see Mucking Type Series above), which omitted the pottery from the smaller kilns.

All groups of pottery found in kilns thus present a

number of problems. Sherds dumped into an abandoned kiln may represent the waste from a number of firings of that particular kiln, waste from an earlier kiln or from nearby kilns either contemporary or later. At Mucking Kilns 2 and 3 were constructed close together (and indeed, Kiln 2 was in fact two separate kilns, 2a and 2b, the latter built into the stoke pit of the former). The waste dumped into these kilns must represent material from a number of firings and phases from any of the kilns. Kiln 1 was badly damaged and very little survived. It was noted that very little pottery was recovered from the area of this kiln. Pottery from Kilns 4, 5 and 6 present the same problems. It is almost impossible to determine a chronological sequence of vessels and products from a specific kiln. Cross reference may be made to pottery and associated finds from other areas at Mucking, particularly well groups and cemetery material, which may provide some dating evidence. The Mucking kilns do, however, form part of a group in South Essex. This should allow a comparison of kiln products, particularly with Orsett, Palmers Girl's School, Gun Hill West Tilbury and Billericay.

As a starting point it is necessary to reassess the interim type series. However, it is not possible to do this using both form and fabric due to the omission of a clear fabric description in Jones and Rodwell (1973). A number of the forms included in the interim type series came from a number of other features across the site and may not represent the actual products of the Mucking kilns.

Kiln 2

Analysis of the products of this kiln has been based on 3000 rim sherds expressed as a percentage of forms. In contrast, the results presented by Jones and Rodwell (1973) present a distorted picture, both of products and their contemporaneity. It would seem very likely that the actual products of this kiln complex consisted of undercut-rim jars, ledge-rimmed jars, straight-sided pie dishes, bead rim pie dishes and wide-mouthed cavetto rim bowls. It is impossible to determine if these products were made in both Kilns 2a and 2b. A reassessment based on 3000 rims gives figures presented in [Table 3.9](#).

Kiln 3

According to Jones and Rodwell only a few hundred sherds could be stratigraphically tied to Kiln 3, and even these are obviously contaminated by strays (1973, 36). There was an acknowledgement that the analysis of Kiln 3 material was not as statistically sound as that for Kiln 2. The original assessment, as with the present, only used 175 rims ([Table 3.10](#)). Comparison with the MPX data for this kiln suggests that the two data-sets are broadly comparable (180 rim sherds were catalogued during MPX from this kiln).

It is reasonable to assume that the main products of Kiln 3 were undercut-rim jars, wide-mouthed cavetto rim bowls, straight-sided pie dishes and bead rim pie dishes. Rodwell dated this kiln to AD 300–410+, based on parallels with Wickford Well 4, and with pottery from the Colchester *mithraeum*; the arguments against this late dating are discussed further below.

Table 3.7. Equivalence table for Jones & Rodwell (1973) type series.

Jones & Rodwell (1973) Form Code	MPX Form Code	Cam Form Code	Going Form Code	Kilns where present	Current date
A: straight-sided pie dish	RA01 RB03 RB04 RC04	Cam 39 Cam 40	B1	2 4 5	RA01: 70/80-120/30 RB03/RB04: 110/120-250/300 RC04: 130/40-230/300
B: beaded-rim pie dish	RA05 RB05 RB06 RB07 RC05 RC06 RC07 RC13	Cam 37	B2 B4	2 4 5 6	RA05: 70/80-120/30 RB05/RB06/RB07/RC05/RC06/RC07/RC13: 110/120-170/180
C: incipient flanged pie dish	RC09 RC12		B5	2 3 4 5	180/90-230/50
D: flanged pie dish	RC10 RC15	Cam 305	B6	2 3 4 5	200/40-320/50
E: ledged-rim pie dish	(Only in Kiln 27)			2	NA
F: ledged-rim jar	AB06 AB07 AC05 AC06		G5	Smaller + 1, 2	AB06/AB07: 50/60-100/110 (BL fabrics) 100-230/50 (GRY fabrics) AC05/AC06: 50/60-100/110
G: cupped-rim bowl	AB08 AC08	Cam 307	E2	2 3 4 5	AB08: 140/50-250+ AC08: 100-250+
H: cupped-rim jar			E27		
I: undercut-rim jar	FA01 FA02 FA03 FA06 FB01 HA01 HA03 HC01 JB07	Cam 268	G22 G23 G24 G25	2 3 4 5	FA01/FA02: 120/30-250 FA03: 150/70-300+ FA06: 100-250/300
K: wide-mouthed cavetto-rim bowl			E5	2 3 4 5	120-230/50
L: wide-mouthed flat rim bowl	(Only in Kiln 27)			2	
M: necked jar with flattened rim	(Only in Kiln 27)			2	
N: large narrow-necked jar	GA02 GC01 GC02 GC04 GC06 GC07 GD04	Cam 296	G34 G35 G36 G37 G38	2 3 4 5	GA02/GC06: 110/120-210 GC01/GC02/GC04/GC07/GD04: 120/30-250+
O: narrow-necked flask	KA01 KB01 KB02		G40	2 4	KA01: 110/120-200/210 KB01/KB02: 110/120-180/90
P: everted rim jar	EA01 EA02 EA03 EB03	Cam 278	G9	1 2 4 6	EA01: 170/80-250+ EA02/EA03: 50/60-110/120 (non-GRY) 120/130-250 (GRY) EB03: 110/120-170/80
Q: folded beaker	NR01		H135	2 4	180/90-250
R: conical-necked beaker	NQ01	Cam 408	H137	2 3 4 5	110/120-200+
S: large storage jar	JB02 JB04		G42	2 4 5	JB02: 70-200/250 JB04: 40/50-250
T: mortarium			D		
U: miniature pottery	NM09 ZA		Q R		
V: miscellaneous and unclassified	JB09 ZB		S		

Table 3.8. Mucking kiln products according to Jones & Rodwell (1973) classes.

	Mucking Kilns																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B	X	X	?	R	R	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F	-	-	X	X	X	-	-	-	X	-	X	X	-	-	-	X	-	X	X	X	X	X	X
G	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I	-	X	X	X	X	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	X	-
J	X	X	X	X	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
L	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M	-	X	?	?	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N	-	X	?	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O	-	X	-	X	X	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-
P	X	R	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q	-	X	?	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T	-	X	?	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U	-	X	-	?	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 3.9. Products from Kiln 2.

Jones & Rodwell Type	%	No. of Rims	Vessel Type
J	40.7	1221	Undercut-rim jar
F	20.7	621	Ledge-rimmed jar
A	9.0	270	Straight-sided pie dishes
B	8.7	261	Beaded-rim pie dishes
K	5.2	156	Wide-mouthed cavetto rim bowl
P	3.0	90	Everted-rim jar
R	2.3	69	Conical-necked beaker
G & Q	2.0 each	60 (120)	Cupped rim bowl Folded beakers
S	1.8	54	Large storage jar
N	1.7	51	Large narrow-necked jar
C	1.2	36	Incipient flanged bowl
V	0.5	15	Unclassified and miscellaneous
E, H, L, M, O	0.2 each	6 (30)	
T, U	0.1 each	3 (6)	Mortaria Miniatures
D absent	0.0	0	Flanged pie dish
TOTAL	100	3000	

Kiln 4

The products of Kiln 4 present several problems. This kiln was partly damaged by a later *Grubenhäus*. The contents of the kiln represent a wide range of forms, which necessitate a reassessment. A high percentage of sherds were badly abraded and likewise a high percentage of rims represented less than five per cent of the vessel concerned. In most cases it is virtually impossible to identify the specific form, with the exception of hooked-rim jars, shallow triangular, or bead rim dishes, squared bead rim wide-mouthed jars and ledge-rimmed jars. It would seem most likely that the sherds were redeposited at a later date. Some sherds represent kiln waste, although by far the larger percentage represents a wide range of fabrics and forms that clearly come from a number of different sources.

Kiln 5

The products of Kiln 5 have also been reassessed using a total of 1130 rim sherds. By far the largest number were hooked-rim jars (FA01): 40.5%, or 458 sherds. The second largest group was wide-mouthed jars (HA01): 12.8%, or 145 sherds. The third largest group was shallow dishes (RB04): 12.7%, or 144 sherds. Shallow dishes (RB03) made up 10.8%, or 122 sherds. AC08 represented 6.9%, or 78 sherds. Of the 26 other forms present all represented less than 3% (indeed 20 of these forms represented less than 1%). Rodwell dates both Kiln 4 and 5 to AD 250–350, due to the absence of latticed and ledge-rimmed jars and the ‘full splendour’ of pedestalled jars seen, but this later dating can now be challenged, as these kilns were clearly

producing second-century wares.

Kiln 6

The information is not available for this kiln. However, if we are to accept Jones and Rodwell's comments, it would seem that the products of Kiln VI were very limited and probably represented bead rim pie dishes, ledge-rimmed jars, wide-mouthed cavetto rim bowls/jars and everted rim jars. Rodwell dated this kiln to AD 100–200, which would accord with the dating assigned in this volume.

As the Mucking Kilns form part of a larger Thameside production centre, these figures may be compared with the products of a number of other known production sites within the region. However, no two sites have been analysed in the same way. The nearest kilns were at the Orsett 'Cock' enclosure. The four kilns were very similar in design to the main Mucking kilns. The kiln pottery from these kilns was quantified by fabric, sherd count, percentage, weight and percentage weight. Cheer (1998) attempted to cross-reference the Orsett products with the Mucking interim type series. However, the fabric codes are unlike any other south Essex or Chelmsford codes, thus making any comparison difficult. The actual Orsett kiln pottery amounted to 2961 sherds and it is unfortunate that no attempt was made to distinguish the products from the four kilns at Orsett. An analysis of the products shows that jars represented 49.98%, or 1480 sherds. Dishes represented 28.8% or 853 sherds and bowl/jars represented 14.69%, or 435 sherds. Beakers represented 5.94%, or 176 sherds. Flasks represented 0.57%, or 17 sherds. The range of products appears to be very similar to the Mucking products. A further comparison with the Palmers Girls' School, Grays gives a slightly different range, although

with a far higher number of pedestal vessels (Jones & Rodwell 1973 Type N.75); there were also flagons and mortaria apparently being produced on the site. All other forms present are as Mucking and Orsett. It would seem that all three centres were in production within a similar time scale.

The main evidence for dating of pottery production must come from Mucking, with particular reference to the cemeteries. It would seem likely that the kilns ceased production by the mid third century, as suggested by the general absence of a number of forms, such as incipient and fully developed flanged bowls. However, the absence of a form may not be indicative of non-production, merely absence of kiln waste.

Why, then, does Rodwell (Jones & Rodwell 1973, 38) assign a date of AD 250–375 to Well 1, with a similar start date for Kilns 4 and 5? The answer seems to lie in Rodwell's dating of his Type N pottery (large narrow-necked jars). One of the vessels found *in situ* at the base of Well 1 was the highly decorated pedestalled jar (type GC04 in the MPX type series, which we date to AD 120/30–200/50+). Rodwell (*ibid.*, 31) suggested that the flanged neck of this jar implied a date not before the later third century, and that this was supported by similar vessels from Wickford Well 4, that also could not be dated to before the end of the third century. He also suggested parallels with pottery from the Colchester 'mithraeum' that was apparently of mid fourth-century date. Further support for a later third- or fourth-century dating for Well 1 and Kilns 4 and 5 was seen in the presence of fully flanged pie dishes (e.g. MPX form

RC10; Rodwell Type D), dated on Colchester parallels to after AD 250. Building on this assumption, Rodwell then assigned Kiln 3 a wholly fourth-century date (*ibid.*, 39), as it 'produced a more limited range of vessels with less attention being paid to decoration and finish than hitherto'.

In fact, there is little evidence for any of these kilns or wells having been in use past AD 250 (though material was deposited into them at points after). Rodwell seems to have assumed that at most two kilns were in use at any one time (*cf.* Rodwell 1982, 41), and dated them accordingly, whereas there is strong evidence in the range of forms and fabrics employed that Kilns 2–5 were largely contemporary, with Kilns 1 and 6 being slightly earlier. None of the kilns or wells produced any typically third- or fourth-century fabrics from significant dating contexts, with the exception of a base sherd from near the bottom of Well 4 that was recorded as later Roman Mayen ware. This was not, however, drawn or further reported on, and it cannot be relied on as key dating evidence (it is recorded in NB 67.24 simply as '1/2 base of brown sandy ware').

With regard to the dating of flanged bowls, it is important to realise that just 222 sherds of such vessels have been recovered from the site. Only five were associated with kilns (Kilns 4 and 5; all in slipped grey ware fabric); one from the bottom of Well 1; while others were in the upper fills of Well 6, RBI, RBII and the 'F' ditches of the Southern Enclosure system. In terms of fabric, most were in slipped and non-slipped grey ware, while some were in Black

Burnished type fabric, and small numbers were apparently in the shell- and grog-tempered fabrics characteristic of early Roman pottery production on the site. The grey ware sherd of RC10 (developed flanged bowl) at the bottom of Well 1 could potentially date from the mid third century (perhaps as part of a closing deposit), which would be consistent with the other evidence from the well; this would remove the justification for Rodwell's later phasing. Other flanged bowl sherds, however, could happily form a part of the small later Roman pottery assemblage in evidence at the site (much of this coming from layers also associated with very Late Roman and Anglo-Saxon pottery).

Table 3.10. Products from Kiln 3.

Jones & Rodwell Type	%	No. of Rims	Vessel type	MPX EVEs %*
J	44.5	78	Undercut-rim jar	49.8
K	13.0	23	Wide-mouthed cavetto rim bowl	11.4
A	10.0	18	Straight-sided pie dishes	13.3
B	7.5	13	Beaded-rim pie dishes	3.5
G	6.5	11	Cupped rim bowl	6.4
D	4.5	8	Flanged pie dish	0.0
S	3.5	6	Large storage jar	0.7
R	3.0	5	Conical-necked beaker	1.9
C, F, L, M, N, T, V	7.5	13	Various	11.9
E, O, Q, U absent	0.0	0		0.9
TOTAL	100.0	175		100.0

Table 3.11. Major early kiln products.

Kiln Number	Total product sherds	Forms Present	Fabric	EVE
11	48	AB06	BLA1	0.36
12	124	AB06	BLA1	0.31
13	15	AB06	BLA1	0.10
14	1009	AB06 DB01 DB07	BLA1-3 BLA3 BLA4	5.38 0.90 1.35
15	11	JB02	GVC	0.05
16	271	AB06 BA01 GA01	BLA2 BLA2 BLA2	1.64 0.54 0.25

It should be noted here that the dating of the Mucking kilns (and thus the wells) was informally revised, even during MPX. Before 1983 (Catherall *et al.* 1983, 135, n.80) Margaret Jones saw Kilns 2–5 as dating to the third century (Kiln 2 being earlier third-century and the others mid to later third-century), a redating caused by the reassignment of the Colchester *Mithraeum* fills to the early to mid third century (Harden & Green 1978). In light of subsequent analyses, the suggested date ranges for these kilns have now been pulled even earlier, into the early second to mid third century AD. This redating is supported by K. Rodwell's interpretation of the grey ware and white ware kiln excavated at Palmers

School, Grays, in 1970 (Rodwell 1983), which she dates to the late second or early third century; this produced grey ware ledge-rimmed jars, and the elaborate pedestal urns of MPX type GC04. This argument about the revised dating of the Mucking kilns is further bolstered by the fact that Mucking did not see the significant increase in variety of Romano-British regional types identified at other sites in the later third century (e.g. at Great Holts Farm, Boreham, Essex: Germany 2003).

In conclusion, it seems that the Jones and Rodwell (1973) interim report, as useful as it is, has been treated as a full and definitive type series without any form of constructive criticism. A number of forms were included that were clearly not kiln products and with comparison with the other Thames-side sites, it is apparent that the production range was very limited.

Although the ceramic assemblages retrieved from the 23 kilns was very substantial and totalled almost one third of the material recovered from the site as a whole, only a very small proportion of this came from the smaller kilns (Nos. 7–23). From [Table 3.11](#), which lists products of Kilns 11 to 16, it is clear that the number of products of these kilns was very limited. It is only possible definitely to identify products from three of these smaller kilns. The main product was shell-tempered ledge-rimmed jars (Jones & Rodwell, Type F; Mucking Type Series AB06). These are poorly fired and a number have graffiti on the shoulder. The form is post-Conquest and, although in the Mucking fabric series the fabric was placed in the BL series, elsewhere in Essex and north Kent the same form and

fabric is always associated with material ranging from AD 50/60 to 90/100. There is a similar form produced in sandy fabrics, which may be a developed form. The range of the shell-tempered AB06 form seems to be limited to west of the River Medway in north Kent and in Essex no further west than the River Lea. Limited numbers occur in Chelmsford, Braintree and other sites in north Essex. There is confusion in reports between this shell-tempered form of ledge-rimmed jar and that of the sand-tempered form (GRY), which continued in production through the second century AD. The shell-tempered forms are made at Gun Hill, West Tilbury and probably Billericay, as well as at Mucking, although there is little evidence for any manufacture outside of South Essex.

Table 3.12. Other Romano-British pottery: sherd count/EVEs by fabric.

Fabric	Poss ID	Def ID	Total	Percentage	
Belgic B	2494	15,348	17,842	12.4%	
Belgic C	311	1501	1812	1.3%	
Terra Nigra	0	4	4	0.0%	
Terra Rubra	2	12	14	0.0%	
Gallo-Belgic	11	5	16	0.0%	
Mica Gilt	21	54	75	0.1%	Conquest
Terra Rubra copy	218	890	1108	0.8%	
Eggshell	3	36	39	0.0%	
Flint-gritted	18	253	271	0.2%	
Lyon	0	5	5	0.0%	
Belgic A	798	35,225	36,023	24.9%	
London	172	4545	4717	3.3%	
Colchester BB	11	46	57	0.0%	
Flagon Series	283	2061	2344	1.6%	Phase 1
GRY	132	36,632	36,764	25.5%	
GRYS	55	15,865	15,920	11.0%	
GIN	77	1630	1707	1.2%	
GVC	152	10,643	10,795	7.5%	
NSP	8	5629	5637	3.9%	
Highgate	5	34	39	0.0%	
French import	4	54	58	0.0%	
Colchester CC	50	177	227	0.2%	
East Gaulish	9	3	12	0.0%	
Koln	55	96	151	0.1%	
Moselle Valley	3	72	75	0.1%	
Brockley Hill	27	503	530	0.4%	
BB2 Type	436	1732	2168	1.5%	Phase 2
Nene Valley	40	354	394	0.3%	
Much Hadham	194	396	590	0.4%	
Parchment	10	47	57	0.0%	
Late Shell-tempered	14	10	24	0.0%	
A' L' Eponge	7	21	28	0.0%	
Portchester fabric D	60	135	195	0.1%	
Alice Holt	3	0	3	0.0%	
Mayen	0	7	7	0.0%	
Kettendon	5	13	18	0.0%	
Oxfordshire CC	98	403	501	0.3%	Phase 3
UNK	11	8	19	0.0%	

Samian*			2691	1.9%
Amphorae*			1129	0.8%
Mortaria*			350	0.2%
TOTAL:			144,416	17.8%

* Estimated totals

Table 3.13. Major pottery forms and kiln production.

Form Code	Vessel Type	Site Total (No)	Site Total (EVT)	Quantified Kilns (Kiln 2 unquantified)
AB03	Jar	2139	50.86	21
AB05	Jar	935	20.92	18
AB06	Jar	4652	122.00	1 (2) 6 8 9 11 12 13 14 16 18 19 20 22 23
AB07	Jar	2107	85.18	1 (2) 6 10 20
AB08	Jar	52	1.31	(2) 5
AC08	Jar	177	37.99	(2) 3 4 5
BA01	Jar	21	1.07	16
BC02	Jar	20	1.61	9 22
BC03	Jar	113	4.00	9
DA01	Jar	449	12.63	22
DB01	Jar	163	12.81	14
DB03	Jar	102	10.43	20 22
DB05	Jar	47	1.13	1
DB07	Jar	54	2.18	14
DC01	Jar	126	5.57	1
E306	Jar	123	10.32	(2) 4 5
EA01	Jar	72	10.42	(2) 5 6
EA02	Jar	324	13.81	(2) 4 6
EA03	Jar	60	2.26	1 (2)
EB02	Jar	13	1.00	(2) 6
EB03	Jar	147	10.71	(2) 6
FA01	Jar	4803	344.40	(2) 3 4 5
FA03	Jar	487	10.54	3 4 5
FA05	Jar	1260	72.04	5
GA01	Jar	150	4.57	16
GA03	Jar	18	1.00	6 19
GB03	Jar	38	1.66	19
GC01	Jar	90	3.79	4
GC04	Jar	461	32.25	(2) 4 5
GC05	Jar	22	2.65	(2) 3 5
GC06	Jar	19	2.48	(2) 4 5
GC07	Jar	61	4.74	(2) 5
GC09	Jar	65	5.37	(2)
GD04	Jar	19	0.07	(2)
HA01	Bowl	1270	75.99	(2) 3 4 5
HB02	Bowl	1	0.04	(2)
JA01	Storage jar	137	1.65	21
JB02	Storage jar	429	10.97	(2) 4
JB04	Storage jar	206	3.49	5
JB05	Storage jar	228	14.65	(2) 4 5
KA01	Flask	214	18.41	(2) 4
NA01	Beaker	38	0.83	4
NJ01	Beaker	11	0.26	(2)
NM07	Beaker	86	5.19	1
NQ01	Beaker	442	14.55	(2) 3 4 5
NR01	Beaker	177	0.47	4

QB01	Dish	19	0.77	19
QF01	Dish	105	0.59	22
RB03	Dish	525	35.01	(2) 4 5
RB04	Dish	425	12.26	4 5
RB05	Dish	463	17.07	(2) 4
RB06	Bowl	365	10.73	5
RC03	Bowl	6	0.51	(2)
RC04	Bowl	53	3.23	4
RC05	Bowl	174	5.50	(2) 4
RC06	Bowl	41	2.96	6
RC07	Bowl	61	1.13	4
RC08	Bowl	1	0.11	(2)
RC09	Bowl	206	2.52	(2) 3 4 5
RC10	Bowl	223	5.78	3 4 5
TOTAL			1148.44	

The vessels are poorly fired, usually oxidised. The vessels may well have had a specialist use as containers, possibly for food products. A number of examples are known from Canvey Island, where they are associated with lids, and more recently at the nearby Stanford Wharf site, where they are found mainly in the shelly ware, but also in the coarse sandy fabric (Biddulph *et al.* 2012, 99). The Stanford Wharf site related to salt production, and the ledge-rimmed jars were the principal jar form found at the main earlier Roman saltern site in Area B. Rodwell (1979, 161) suggested that these ledge-rimmed jars may have been used for the storage and transport of crystalline salt, and Biddulph and colleagues support this view, arguing that a specialist function might explain its limited distribution, and lack of incorporation into local pottery repertoires. That a saltern has now been located very close to Mucking would also serve to explain why this pottery form was being produced in the Mucking kilns.

While tentative, the resultant conclusions about the products of each kiln do appear to correspond with the relative chronology of the kiln types themselves:

early ledge-rimmed jars in shell-tempered fabrics (AB06) were consistently associated with the ‘early’ simple kiln types (Kilns 7–23), while a greater range of products were associated with the larger (and later kilns), these usually in grey wares.

Looking at pottery supply to the site as a whole, [Table 3.12](#) shows the sherd counts (as recorded in the MPX data-set) and percentages of the various pottery fabrics recovered from the site (this does not include vessels from the cemeteries). Immediately apparent is the dominance of local grey wares (GRY, GRYS, GVC & NSP), along with local shell-tempered wares (the BLA series, termed ‘Belgic A’ in the table) and the earlier grog-tempered wares (the BLB series, termed ‘Belgic B’). These appear to comprise the bulk of the locally produced wares. Imports are also present, in all phases of the site, with small amounts of true *Terra Rubra* and *Terra Nigra* from the earlier first century AD (with Gallo-Belgic imports also). Later phases see small numbers of Lyon ware sherds and other French and East Gaulish imports, while third- and fourth-century imported fabrics comprise (again in small amounts) Koln, Moselle Valley, Mayen and *céramique à l’éponge* wares. The distribution and significance of these later wares will be discussed later in this chapter. Samian and amphorae were also present, mainly in the first and second centuries AD. A more detailed breakdown of pottery forms, and which kilns probably produced them is given in [Table 3.13](#), while [Table 3.14](#) presents a detailed mapping of numbers of sherds of pottery forms against fabric (with predominant form/fabric combinations highlighted in grey); these are arranged in a broadly chronological

[illegible]

	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
--	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	---	---	---	---	---	---	---	---	---	---

The number of recorded sherds bearing graffiti recovered from the site, some 20 vessels, is among the largest recovered from a rural site in Essex. As at Chelmsford, literate graffiti are in a distinct minority (Nos. 1–3; see [Fig. 3.36](#)). The bulk of the marks on the vessels, if one disregards the very large number of ‘potters’ graffiti’ recorded from the site, comprise simple ‘X’ motifs. These are usually found scratched on the shoulders of the vessels, and also on the bases of them. Traditionally they are identified as numbers, usually capacity estimates, or illiterate marks of possession. Neither explanation seems to be particularly convincing: while capacity marks are known (occasionally with the qualification, p(ondo), or pounds), it is odd that the numeral singled out for depiction is so often ‘X’ – 10 – when the vessels are clearly of widely differing sizes. Moreover, there is seldom any sign of a line or another indication of the level to which the vessel should be filled. If a unit of measurement is intended, whether fluid or solid, it must have been so variable as to be virtually without use. It is thus extremely doubtful that any such meaning was ever intended. The notion that these marks are ownership symbols seems without merit. Its very lack of exclusivity, one might think the sole important requirement, strongly suggests these are not marks of possession, and the fact that many of these marks are placed on the base of the pot, where they cannot be seen (i.e. literally, occult marks) is a distinctly odd feature when one considers that the intention might be to deter theft in the first place, rather than act as an aid to later recovery. There remains only one likely explanation, which their

hidden placing strongly supports – they are of magical significance. When it is remembered that the use of a similar motif has been found on the exterior base of pottery vessels in the region at least, if not beyond, goes well back into the pre-Conquest period (it is evident on vessels from the red hills of Essex, and indeed, on Middle or Early Late Pre-Roman Iron Age pottery from Mucking itself), the likelihood that this is the correct explanation becomes stronger. Clearly, any pottery vessel used for the storage and safe keeping of food and drink would require protection so that its contents would not be corrupted by malevolent forces, whether conjured up by human or divine agencies. It seems likely that these should be placed among the category of religious or superstition rather than given more mundane explanations. (NB. The absence of many of these sherds from the MPX computer catalogue suggests that they were extracted before recording took place, as with some of the mortaria.)

Literate Graffiti

1. Bead rim dish in grey ware. 'PRI' (Fig. 3.36.1). Complete. Scratched after firing. Published (*JRS* 59 1969, 245 no.72; *RIB* 2 no. 2503.388). Ditch RBII (232N/395E; NB 21.48; not in MPX computer catalogue).
2. Ledge-rimmed jar rim with post-firing graffito scratched on the exterior; 'VERI', probably the genitive of VERVS (Fig. 3.36.2). Published (Jones & Rodwell 1973, fig. 5.29; *Britannia* 2, 1971, 296 no. 43; *RIB* 2 no. 2502.24). From Kiln 3 ditch (307N/630E; THURMus: M5033; not in MPX computer catalogue).
3. Straight-sided pie-dish (Rodwell's Mucking Type 'A'; Jones & Rodwell 1973, 40, fig. 4.5), scratched with a post-firing graffito on the exterior wall; 'MAGNV(S)' (Fig. 3.36.3). Published (*ibid.*; and *JRS* 59 1969, 245 no. 70; *RIB* 2503.310). Well 2 (160N/530E, Level 0/1; THURMus: M5042; not in MPX computer catalogue).

Sketches

4. Sherd of a closed form, probably a narrow-necked jar, with a post-firing graffito depicting a figure standing frontally (Fig. 3.36.4). Only part of the head and left shoulder survives. The figure has two crudely-executed projections from his head which may depict wings, for he(?) bears across his right shoulder a wand-like object around which are entwined two frond-like strands. It is possible that the object is a crudely executed caduceus, and that the figure is intended to represent the god Mercury. It is of interest to note that a vessel from Chadwell St Mary (Manning 1962) has a graffito scratched on the shoulder depicting small figures, perhaps *genii cucullati*. It is possible that this vessel was a Mucking product, and that the Mucking potters were prone to spasmodic expressions of devotion (or more likely, whimsy). Kiln 4 chamber (748N/366E, Kiln 4 collapsed baulk, MPX Drawing No. 1611).

Miscellaneous Numerals and Marks

5. Sherd of an uncertain closed form, with the ?numeral 'VII', scratched after firing. Ditch (302N/204E Level 1; RB Structure 11; NB 73.79; not in MPX computer catalogue).

6. Sherd from a jar in a pale grey fabric, with, scratched after firing, an asterisk-like symbol on the basal exterior. GH13 (150S/203E; NB 19.20; not in MPX computer catalogue).

7. Sherd from a closed form, probably a jar, with a post-firing graffito; 'XI'. A numeral? Ditch A1A (1140N/515E; not in MPX computer catalogue).

8. Rim of a necked jar with a post-firing graffito, 'X'. Ditch RBI south (265N/300E; NB 55G.174; not in MPX computer catalogue).

9. Shoulder of a jar with a post-firing graffito, 'X'. Context uncertain (NB 55G.174).

10. Base sherd from a closed form, probably a jar, with a post-firing graffito, 'X'. From a pit (913N/812E, Level 3; NB 253.33; not in MPX computer catalogue).

11. Base of a jar with a post-firing graffito. (Ditch F3, Level 1; 735N/345E; NB 81.-; not in MPX computer catalogue).

12. Bifid-rimmed high-shouldered jar with a double cordon on the neck, in a grey fabric, possibly a kiln product. Two lightly inscribed post-firing graffiti on the shoulder below the cordons read IIIV, and possibly, II/I/. This lacks its lower part. Probably second-third century. Ditch A2B (Level 7-8: 1248N/535E; NB

208.45; 55A.236–7; not in MPX computer catalogue).

13. Body sherd of an oxidised, vesicular closed form, probably first century date. Not writing, perhaps a symbol. Ditch B7B (Level 2; 1296N/249E; NB 178.49; 55A.92–3; not in MPX computer catalogue).

14. Body sherd of a closed form in Romanising fabric (light brown core, black inner surface) with inscribed post-firing graffito: 'IX'; complete. Ditch A1A (Level 5; 1140N/515E; NB 217.155; 55B.34–5; not in MPX computer catalogue).

15. Base of a jar, perhaps Hadham ware, with bright orange core and surfaces. On the basal exterior is a fragmentary graffito resembling an asterisk. Brickearth, on line of Ditch A1A (Level 3; 995N/777E; NB 259.58; 55B.152–3; not in MPX computer catalogue).

16. Drag 31R, CG, base. Later Antonine. Graffito: two parallel incisions across base of foot (sic). Ditch RBI (Level 2, depth 6–12”; MPX Samian Computer Nr 343).

17. Rim of a necked jar with post-firing graffiti on rim: 'X'; form FA01 in GRY (Fig. 3.27). Well 4 (Level 3A, 1053N/635E; MPX Cat. No. 8255; Drawing No. 575).

18. Large jar (probably a Mucking product) with postfiring graffito IIVX on upper body. Partly lost through spalling. Cemetery IV Cremation 1086b (*Britannia* 10 1979, 349 no. 22; *RIB* 2 no. 2503.81).

19. Plain-rimmed dish with a post-firing graffito on the basal exterior: a cross. Cemetery I, Grave 52.

20. Drag 31R, CG, profile. Graffito: 'X' under base. Pit (Level 4, 160N/464E; MPX Samian Catalogue No. 1281).

21. Body and base of a grey ware jar, with scored grid on base. Ditch A1A (Level 0, 1244N/805E; MPX Computer No. 3098).

22. Body and base of a grey ware jar, with scored grid on base. Ditch A1A (Level 0, 1245N/805E; MPX Computer No. 3099).

23. Body sherd of grey ware jar with a post-firing 'X'. RBII (Level 1, 170N/360E; MPX Computer No. 13293).

24. Plain-rimmed dish with a post-firing graffito on the basal exterior. Cemetery I, Grave 17.

25. Complete samian vessel (Drag 33), with a graffito 'XXII' on the exterior wall. Cemetery II, Grave 899.

Graffiti on Shell-tempered Jars

A total of 118 examples of this curious 'inscription' type were found at Mucking (Figs. 1.4 & 3.27; see *Case-studies*, below). All of them were on ledge-rimmed jars (Forms AB06 & AC05), where the form was identifiable. They are all on vessels in a heavily shell-tempered fabric

that barely outlasts the first century AD. Since the discovery of these marks and their publication (Jones 1972), early shelltempered vessels with curious pre-firing graffiti have been found on many sites across Essex (Going 1987, Biddulph & Stansbie 2012), and a possible second production site has been found at Chelmsford (Going 1992). There seems to be little doubt that they are not capacity marks or possessive notation. Their significance is uncertain and unguessable. Mucking, with so many such marked vessels, is clearly a major source for them, and thus their likely originator. Examples of various notations are illustrated on [Figure 3.27](#).

***Pottery Petrology* David Williams**

A number of samples of ‘Belgo-Roman’ and Roman pottery from Mucking, many of them associated with the local kilns (Jones & Rodwell 1973) were submitted for petrological analysis. The object of the examination was, firstly, to characterise more closely the fabrics directly associated with the kilns; secondly, to compare them with other pottery suspected of being made at Mucking, and thirdly, to identify possible non-local fabrics. All the samples were thin-sectioned and studied under the petrological microscope, and four were also subjected to a heavy mineral separation. Due to the fact that the overwhelming non-plastic inclusion-type in the pottery is quartz, a number of different fabrics were distinguished on a textural basis: that is according to the size, shape and frequency of the quartz grains in each thin section sample. The majority of the pottery examined here has been illustrated and described in the hand-specimen by Rodwell (Jones & Rodwell 1973) and the figure references quoted here refer to that publication.

Group 1

‘Graffito ware’ provisionally dated to the time of the Claudian

Conquest (Jones 1972), but now known to be mid to later first-century in date.

730N/339E (x) Fairly soft, slightly rough and soapy vesicular fabric, light red (Munsell 10R 6/8 to 5/6) surfaces and dark grey core. Thin-sectioning shows a fairly clean clay matrix containing a number of angular-shaped voids, commensurate with the vesicular nature of the sherd. A small fragment of shell is present in the clay matrix, and it is possible that the voids represent inclusions of shell that have been lost due to the particular soil conditions at the site (Jones 1972, 336). Also present in the section is a small amount of grog (crushed up pottery), a scatter of sub-angular quartz grains and some flecks of mica.

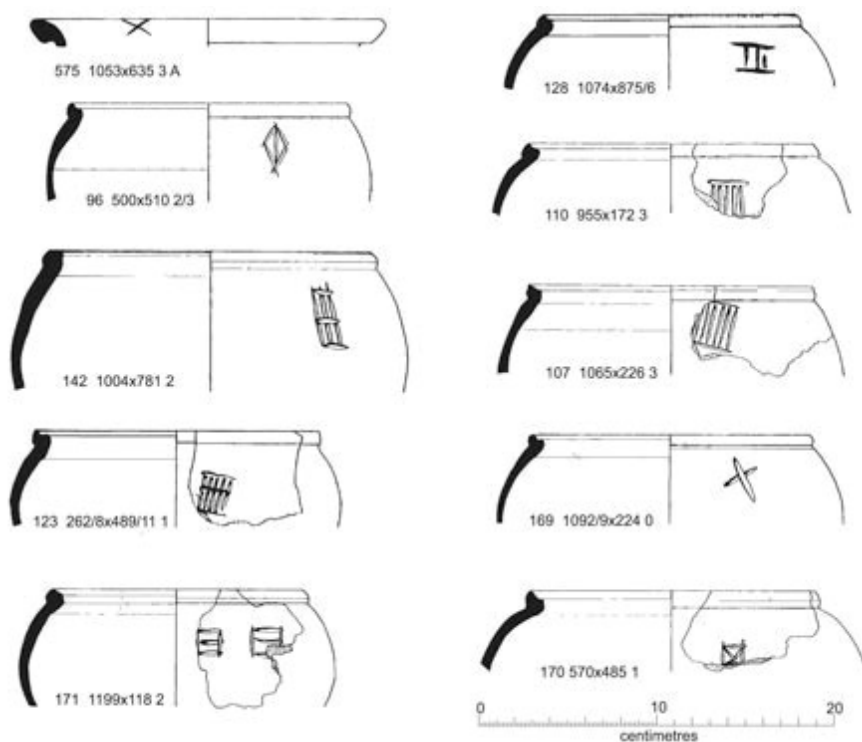


Figure 3.27. Pottery graffiti.

Group 2

Pottery associated with the Belgo-Roman kilns, dated to the immediate post-Conquest period (Jones & Rodwell 1973).

350N/600E (1) Fairly hard, rough sandy fabric with quartz grains and

some flint protruding through the grey (10YR 5/1) surfaces. Thin sectioning shows a groundmass of subangular quartz grains, generally 0.15mm and under in size (although with a scatter of larger grains up to 1mm across), flecks of mica and a little flint and iron ore.

1273N/175E (3) Hard, slightly rough sandy fabric, light red (10R 6/8) to buff throughout. Fairly similar in thin section to 350N/600E (1) but with some additional inclusions of grog.

1275N/179E (2) Hard, slightly rough fabric, dark grey (7.5YR N4/) throughout.

612N/542N (2) Very hard, rough sandy fabric, orange surfaces, light grey core.

1273N/175E (3) Hard, rough fabric, reddish-buff throughout. In thin section all three sherds contain a scatter of ill-sorted sub-angular quartz grains ranging up to 1mm in size, flecks of mica and a little flint. Sample 612N/542E (2) shows an optically isotropic matrix indicating a high temperature of firing.

The following sherds are also from post-Conquest contexts, but were not directly associated with the Belgo-Roman kilns.

520N/518E (2b) Similar in thin section to the 'graffito' sherd above but appearing to lack the inclusions of grog.

730N/399E (x) Fairly similar in thin section to the 'graffito' sherd above.

1272N/182E (1) Possibly a more sandy version of the vesicular fabric associated with the 'graffito' sherd above.

520N/518E (2c) and 520N/518E (2a) Both sherds are similar in thin section and show frequent sub-angular quartz grains of an average size of 0.1–0.4mm, some grog, flint and flecks of mica. These two samples are not exactly matched by those products of the Belgo-Roman kilns analysed above, but they do contain a certain amount of grog, also present in the 'graffito' sherd.

660N/374E (3) Fairly thick, moderately hard fabric; light greyishbuff (10YR 6/3) outer surface with reddish-brown inner surface. A scheme of deep horizontal grooves set close together appear on the outer surface of the sherd. Thinsectioning shows frequent silt-sized grains of quartz, whose size suggests that they occur naturally in the clay, flecks of mica and a little iron ore. The source of this material is unknown.

Group 3

Kiln 2, originally dated to the third century (Jones & Rodwell 1973), but now known to be second-to third-century in date. Figure numbers

refer to Jones and Rodwell 1973.

M3002a	Fig. 4, no. 10	Type B	Bead rim pie dish
M3068b	Fig. 5, no. 38	Type G	Cupped-rim bowl
M3033b	Fig. 5, no. 41	Type H	Cupped-rim jar
M3291	Fig. 7, no. 65	Type M	Necked jar with flattened rim
M3231a	Fig. 8, no. 72	Type N	Large narrow-necked jar
M5044	Fig. 9, no. 75	Type N	Large narrow-necked jar
M3269a	Fig. 9, no. 93	Type O	Narrow-necked flask
M3244b	Fig. 10, no. 96	Type Q	Folded beaker
M3130a	Fig. 10, no. 100	Type Q	Folded beaker
M3289	Fig. 10, no. 105	Type R	Conical-necked beaker
M3179a	Fig. 10, no. 106	Type R	Conical-necked beaker
M3237c	Fig. 10, no. 119	Type U	Miniature pottery

Thin-sectioning shows frequent sub-angular quartz grains of an average size of 0.05–0.3mm, with occasional larger-sized grains, small fragments of flint, a little quartzite, iron ore and some discrete grains of feldspar.

In thin-section, two other sherds (M5047 & M3091a) were found to be similar to the above products of Kiln 2.

M5047	Fig. 9, no. 90	Type O	Narrow-necked flask. Well (1)
M3091a	316N/622E (3)		Bodysherd from a ?jar
M3212a	Fig. 10, no. 118	Type U	Miniature pottery

Thin-sectioning shows numerous well-sorted sub-angular quartz grains of an average size of 0.15mm and under, flecks of mica and a little flint. Similar to the Belgo-Roman sherd 350N/600E (1), but lacking the scatter of larger-sized grains present in that sample.

M3221a	Fig. 4, no. 1	Type A	Straight-sided pie dish
M3248a	Fig. 5, no. 30	Type F	Ledge-rimmed jar
M3033d	Fig. 6, no. 48	Type J	Undercut-rim jar
M3180a	Fig. 10, no. 112	Type S	Large storage jar

Thin-sectioning shows a golden-yellow optically anisotropic clay matrix containing a scatter of ill-sorted sub-angular quartz grains up to 1.2mm in size and flecks of mica, flint and siltstone. A heavy mineral separation on sample M3180a revealed an assemblage of non-opaque grains rich in zircon but with a conspicuous amount of kyanite, a less common mineral than zircon, and one which is known to occur in the Tertiary deposits of Essex.

M3274b	Fig. 4, no. 17	Type C	Incipient flanged pie dish
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Thin-sectioning shows a similar fabric to M3221a, M3248a, M3033d, M3180a, but with fewer inclusions.

M3003a	Fig. 5, no. 26	Type F	Ledge-rimmed jar
M3208a	Fig. 5, no. 27	Type F	Ledge-rimmed jar
M3101a	Fig. 5, no. 28	Type F	Ledge-rimmed jar

Similar in thin section to samples M3002a etc, but with slightly more frequent larger-sized quartz grains and flint.

Group 4

Kiln 3, originally dated to the fourth century (Jones & Rodwell 1973), but with the proviso that some sherds associated with the kiln may in fact be strays from Kiln 2; this kiln is now also dated to the second- to third-century.

M3297c	Fig. 4, no. 18	Type D	Flanged pie dish
M3305c	Fig. 10, no. 110	Type S	Large storage jar

Thin-sectioning shows a groundmass of sub-angular quartz grains of average size 0.1mm and smaller, and a scatter of larger grains ranging in size from 0.2–0.6mm, with plentiful mica, a little iron ore, quartzite and some flint. A heavy mineral separation on M3297c produced an assemblage of non-opaque grains rich in zircon and with a little garnet and andalusite, but lacking the kyanite that is a distinctive feature of the other analyses carried out in this examination of Mucking pottery.

In thin section another sherd was found to be similar to the above products of Kiln 3:

M5058e	Fig. 7, no. 64	Type L	Wide-mouthed, flat-rimmed bowl
M3305a	Fig. 7, no. 58	Type K	Wide-mouthed, cavetto-rim bowl
M3333a	Fig. 10, no. 101	Type R	Conical-necked beaker
M3313	Fig. 11, no. 130	Type V	Unclassified

Similar in thin section to samples M3002a, *etc*, from Kiln 2. A heavy mineral separation gave an assemblage rich in zircon and with a conspicuous amount of kyanite.

Group 5

From Well (1) deposit.

M5050a	Fig. 4, no. 19	Type D	Flanged pie dish
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Thin-sectioning shows a groundmass of sub-angular quartz grains generally under 0.05mm in size, a scatter of larger grains of average size 0.1–0.3mm, and frequent flecks of mica. A heavy mineral separation gave an assemblage rich in zircon and with a conspicuous amount of kyanite.

M5049	Fig. 4, no. 14	Type B	Beaded-rim pie dish
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Thin-sectioning shows frequent ill-sorted sub-angular quartz grains ranging up to 0.7mm in size, flecks of mica and some flint.

Group 6

Grey ware mortaria.

322N/610E (3) Fairly hard, slightly rough fabric, with trituration grits of flint, dark grey (10YR 4/1) surfaces, light grey core. Thin-sectioning shows ill-sorted sub-angular quartz grains ranging in size from 0.1–1.0mm, flecks of mica, a small amount of fairly large fragments of flint, and a little sandstone.

288N/622E (1) Hard, slightly rough fabric, reddish-grey (5YR 5/2) throughout and 311N/642E (x). Hard, slightly rough fabric, reddish-grey (5YR 5/2) throughout. Thin sectioning shows frequent sub-angular quartz grains of average size 0.1–0.2mm, with occasional larger grains, some flecks of mica and a few fairly large fragments of flint.

The textures of the three mortaria samples do not match exactly any of the above kiln products; however, given the common range of inclusions present and the size-variety of quartz represented in the kiln sherds, a local source cannot be ruled out.

Group 7

Possible non-local wares.

635N/566E and 304N/314E Fairly thick, very hard fabric, containing visible volcanic and sedimentary inclusions; creamy-buff (10YR 8/4) throughout. Thin-sectioning reveals that the inclusions are made up of sub-angular quartz grains, potash and plagioclase feldspar, some green augite and brown hornblende and

fragments of trachitic lava and medium-grained quartz sandstone. This range of inclusions closely parallels that recognized in Mayen ware (Fulford & Bird 1975, Fabric 1) and a similar origin in the Eifel/Rhine region of Germany is likely. The occurrence of Roman Mayen ware in Britain appears to be concentrated in the fourth and early fifth centuries AD (*ibid.*).

770N/369E, 360N/335E (1) and 637N/573E Fairly thick, hard, very sandy fabric; generally creamy white (7.5YR 8/2) throughout. The basal sherd 770N/369E has a series of light horizontal grooves, unevenly spaced, on the outer surface. Under the petrological microscope the fabric can be seen to consist of frequent sub-angular quartz grains, ranging in size from 0.1–0.8mm, set in a very clean clay matrix. The source of this material is unknown.

565N/230E and 160N/170E Moderately thick, hard fabric; light red (2.5YR 6/6) to reddish-brown (2.5YR 5/4) throughout. Thin sectioning shows that both sherds contain inclusions of sub-angular quartz grains of an average size of 0.05–0.3mm, flecks of mica and a scatter of small fragments of flint/chert. Three sherds from the Late Roman kilns at Much Hadham, Herts., were also thin-sectioned and compared with the two samples from Mucking, due to macroscopic resemblances in fabric. This indicated that the fabric of both sets of sherds is similar enough in composition and texture to suspect the possibility of a common origin.

637N/573E (3) Thin, soft sandy abraded fabric, greyish-brown (2.5Y 5/2) surfaces, reddish-brown core. 1046N/632E (23) Thin, hard fabric, grey (2.5Y N4/) slip and core. Thin-sectioning of both sherds shows that 637N/573E (3) contains numerous inclusions of sub-angular quartz of an average size of 0.05–0.23mm and some flecks of mica, while 1046N/632E (23) is clearly a much finer fabric, containing a scatter of sub-angular quartz grains 0.1mm and under in size and flecks of mica. Comparison in thin section with a flagon sherd from the Highgate kilns shows some similarity with 637N/573E (3).

1050N/622E (4) Much abraded sherd of London Ware. Thin sectioning shows frequent sub-angular quartz grains under 0.1mm in size. Texturally, this sherd is similar to London Ware from Southwark, Copthall Close and the Bank of England (Williams 1978, 586).

The petrological analysis of the Mucking kiln products highlights the problems involved in characterising a

group of pottery that contains very common inclusions. Texturally, there seems to be a certain degree of variety present in the products that have been attributed to the local kilns. This may possibly reflect a situation where several potters were using the same kilns. This would either involve each utilising a slightly different source of raw materials (and the heavy mineral results would seem to suggest this) or else each having their own particular 'mix' for the clay. Given this degree of variety, it makes it difficult to establish a standard fabric for the wares of the Mucking kilns, and so be confident in comparing suspected products of the kilns, as in the case of the grey ware mortaria. Previous work indicates that the local Mucking brickearths are quite suitable for potting (Jones & Rodwell 1973, 15). Thin sections of a small number of local baked clay samples reveal a similar range of inclusions to the majority of pottery examined.

Other Ceramic Finds

The highlight of this section is arguably the site's figurines, one of which has previously been published (Johns 1976). This section also includes Margaret Jones' appraisal of the site's tile. When it was written a number had evidently not been available for study, for it is now known that the assemblage amounts to some 2130 pieces. Interestingly, there is no record of any *opus signinum* or painted plaster from the site, though Well 4's patterned daub is certainly significant. Nor was any definite briquetage evidently identified; this is noteworthy given the scale of the salt industry

at the neighbouring Stanford Wharf excavations (Biddulph *et al.* 2012).

Clay Figurines Catherine Johns and Frank Jenkins

The terracotta figurine of Mars discussed here has already been published (Johns 1976), but is included here for the sake of completeness.

1. 385N/520E; Level 1, 'Enigma'. NB 72.77 (Fig. 3.28.1)

The figurine represents the god Mars in a typical pose, his hand resting on the rim of an oval shield, his right hand raised and grasping a spear. He wears a cuirass decorated with two confronted animals in relief, with a double row of lappets at its lower edge, a tunic, greaves, and a voluminous cloak that envelops his left shoulder and arm. The shaft of the spear survives, but the spearhead is lost, as are the right hand and forearm and head and feet of the figure. Part of the rim of the shield is also broken away. In its damaged condition, the statuette is 12.5cm high and 6.5cm broad. The modelling is competent. The figure was made in a twopiece mould, the roughly trimmed join remaining clearly visible. The clay is fine, hard, and of a light grey colour, with numerous small black inclusions; some surface areas are pinkish. The surface is marred, particularly at the front of the figure, by many small lumps and nodules.

Small terracotta statuettes are much less common in Britain than in other northern and western Roman provinces. Most of the examples found in Britain were imported from the major manufacturing area in Central Gaul, the valley of the Allier. Other important centres of the industry were in Armorica, and the Cologne area. The Gaulish and Rhenish figurines are typically of a fine white pipeclay (see Nos. 2–3 below), though red clays were also used. The range of subjects is wide, Venus and the mother goddesses being particularly popular, though many other deities and animals are also found. A parallel for the Mucking

Mars cannot, however, be found among the Gaulish and Rhenish types (Mr F. Jenkins kindly comments that he has not seen a parallel to this piece) and the clay, too, is totally unlike those used at these production centres. The surface nodules on the Mars figurine from Mucking point to another significant difference: whilst moulds of two or more pieces were used in the manufacture of Gaulish pipeclay figurines, these moulds were normally made of fired clay, as the surviving examples prove. The Mucking Mars on the other hand, was cast in a plaster of Paris mould, the surface nodules representing the bubbles formed when the wet plaster was setting on the archetype. The nodules, frequently seen on Roman lamps, are generally accepted as an indication of manufacture in a plaster mould (Vertat 1969, 118). The use of plaster moulds for lamps and for some types of relief-decorated clay objects was of course known in Gaul. Nevertheless, the combination of the unusual type, clay, and manufacturing technique seen in the Mucking Mars can be regarded as strong indications of manufacture at a centre other than the well known Gaulish and Rhenish ones.

It has not so far been possible to establish where the figurine was made, but a purely visual examination of the clays suggests parallels with some Campanian figurines (Dr Reynold Higgins agrees that the clay of which the Mucking figurine is made resembles some Campanian clays, with small inclusions of volcanic material). If the Mucking figurine was indeed made in Italy, it is likely to have been a personal import rather than an object of trade. In any case, this small terracotta is an unusual and exceptionally interesting

find.



1



2



3



The object came from a rubbish deposit lying in an area of overlapping scoops and hollows (the ‘Enigma’), whose original purpose may have been gravel pits.

2. 160N/529E; Level 1, Well 2. NB 65.57 (Fig. 3.28.2)

Part of the lower half of a pipeclay ‘Venus’ figurine. The piece is broken off at the tops of the thighs and both feet are missing. The left hand survives, grasping part of a decorated support. The fragment is from one of a well-known series of pipeclay statuettes, alluded to above. It was made in a two-piece mould, the seams of which are clearly visible.

3. 160N/529E, Level 0, Well 2. NB 50.75 (Fig. 3.28.3)

Fragment of pipeclay statuette, made in a two-piece mould. It is uncertain what it is intended to depict.

Ceramic Building Material

*Margaret Jones*¹¹

Analysis of the ceramic building material from Mucking had three main objectives:

- 1) To show by distribution where the main Romano-British buildings were probably sited.
- 2) To contribute to the dating of field ditches in assessing the development of the Romano-British field system. (Ditches that contained tile fragments in secondary fills only were presumably dug later than those that contained tiles in primary fills.)
- 3) To consider the likely character and economic status of the building by the presence of specialised and unusual tiles e.g. *tubuli* (indicating hypocausts), and *tegulae mammatae*, an unusual building component presumably indicating above average wealth.

When cataloguing, it was necessary to decide which attributes to record, bearing in mind that there was only one entire tile – a *tegula* used to roof the flue of Kiln 2. Since initial cataloguing had indicated that thickness seemed likely to define *tegulae*, *imbrices* and

tubuli against bricks this was recorded, but as there was no possibility of calculating by area and weight against area of roofed building (as at Beaufort Park: Brodribb 1979), the length and breadth of fragments were not recorded. However, because of the high proportion of fragments and scraps in this collection, weight and a number count were included to aid quantification ([Table 3.15](#)).

With the exception of one whole *tegula*, used to roof the flue of Kiln 2, the only tiles from their original context were fragments bonded into the walls of the corn-driers. The great majority were loose fragments from ditch fills. It might be thought that this could represent manuring of arable fields (the tiles being scraped up with manure from stockyards), but by modern analogy their findspots could be explained equally by the ubiquitous human practice of pitching rubbish (of which tiles are durable survivors) into ditches or hedge bottoms.

Whatever the explanation, one would not expect tiles to be deposited far from building sites. Although some fragments are overfired and distorted, there was no evidence for a nearby tile kiln (which have been rarely found in Essex).

Fabric analysis has not been undertaken. Judged by eye and without a hand-lens, the majority of tiles were made from a fine red fabric (F1); where the surface was softer to the touch (F2); when loaded with sand (F3) and other fabrics not fitting into the previous (F4). Colour ranges were not consistent with fabric types and presumably reflect firing rather than fabric variation. Some tiles contained occasional flint, but none contained certain identifiable organic temper, in

contrast with the so-called ‘Belgic blocks’ of the later Iron Age.

The most common impressions on tiles were of animal origin. One *tegula* had a possible wood grain impression on its bottom-moulded surface; no textiles were noted. A deliberate kind of marking has been termed ‘signatures’ by Brodribb. Twenty-two of these occurred on *tegulae*, 19 on bricks and 129 on other or unidentifiable tiles. No examples of what Brodribb terms tally marks or stamps were noted. None were observed on *tubuli*.

Table 3.15. Ceramic building material: count by class.

Fabric	BRK	IMB	TUB	TEG	UNC	VOU	TOTAL
F1	76	209	70	431	2328	1	3115
F2	6	76	76	87	517	0	762
F3	36	69	4	74	478	0	661
F4	1	3	0	4	32	0	40
TOTAL	119	357	150	596	3355	1	4578

Fabric	BRK	IMB	TUB	TEG	UNC	VOU	TOTAL
F1	30.0	22.8	5.7	73.9	201.0	1.0	334.4
F2	1.6	7.8	7.1	12.9	34.3	0.0	63.7
F3	12.6	9.3	0.3	17.2	58.2	0.0	97.6
F4	0.1	0.2	0.0	1.2	4.0	0.0	5.5
TOTAL	44.3	40.1	13.1	105.2	297.5	1.0	501.2

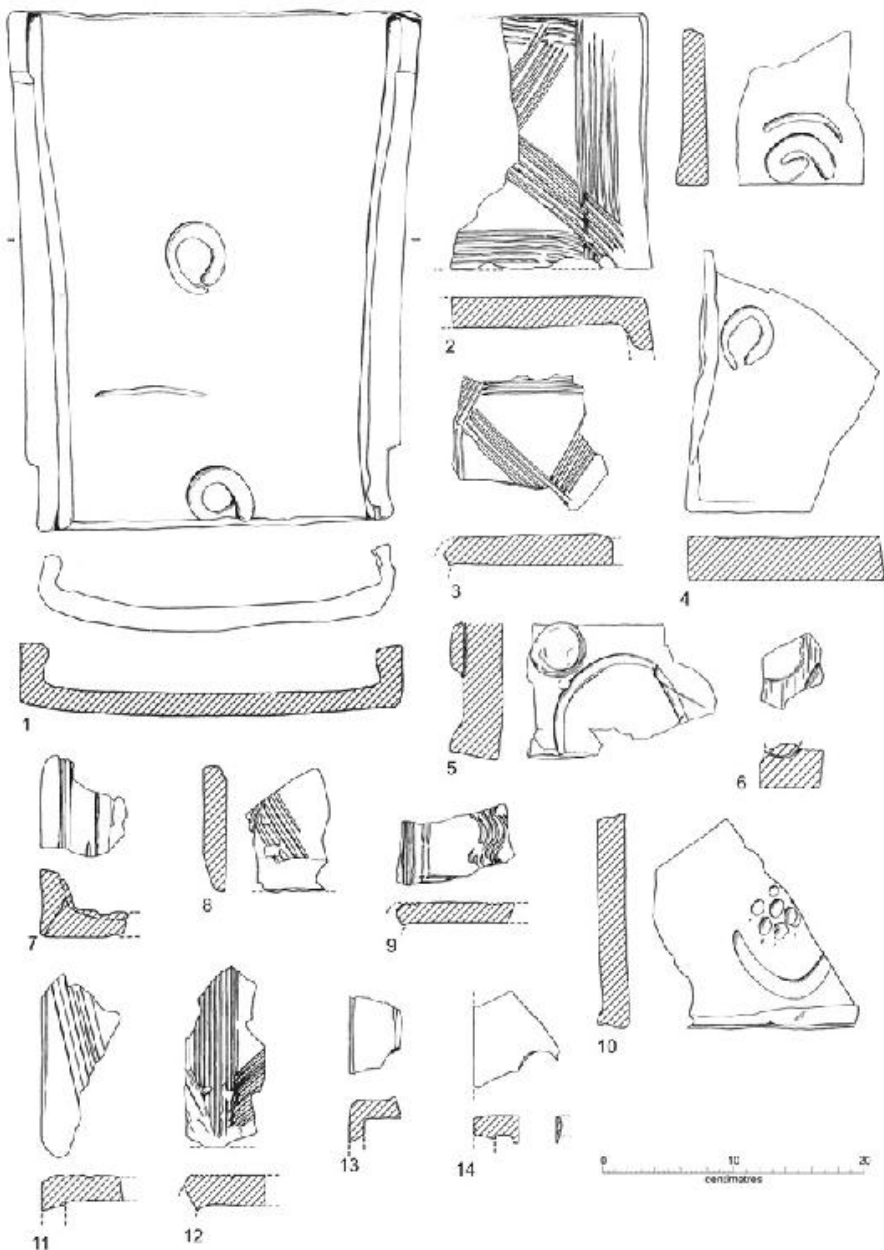


Figure 3.29. Ceramic building material.

stamps were noted. None were observed on *tubuli*. Characteristics of individual tiles are:

Tegulae

One complete example (L. 382mm, W. 310mm, Th. of body 19mm,

Wt. 4600g), found in a primary context forming a roof on Kiln 2 flue (317N/622E), fabric F1.

There were 596 examples of certain *tegulae*, between 12mm and 36mm in thickness. A further 1188 fragments were less than 18mm thick, and may therefore belong either to this group or to the *tubuli*. Apparently shaped in a mould having sides only, i.e. without a base, the surface underneath was invariably rough and sanded; flange thickness (FLT) and flange height (FLH) are recorded. There were also six variants of flange end types. Twenty-two had signatures, mainly on the lower leading edge; several variants were noted as identified by Brodribb (1979) and 20 had fingerimpressed grooves along the internal flange angle.¹²

Imbrices

There were no complete examples, and none with complete length or width, but 577 fragments were recorded. As with *tegulae*, the inside has a rough moulded surface, ranging in thickness from 9 to 35mm. No signatures were recorded. Fabric F1 was most common.

Bricks

Since no complete dimensions survived, it was impossible to distinguish between *bassales*, *pedales* or Lydian bricks. The thickness range of the 119 certain bricks was 18mm to 60mm. Those fragments with a thickness greater than this are more likely to be either *sesquipedales* or *bipedales*, and less likely to be either *tegulae* or *tubuli*. Nineteen examples had signatures.

Tubuli

A total of 154 definite examples, and 12 possible examples of *tubuli* were identified, with a thickness range of 8mm to 27mm. Since combing was not shown on any other tile than *tubuli*, it has been assumed that all combed fragments are from such tiles, with one partial exception: a *tubulus voussoir* (Fig. 3.29). Comb teeth ranged in number from two to eight, producing both straight and curved 'designs'. Four (possibly five) cutouts were noted; both square and circular types were present. One relief design was noted, from pit 555N/440E (Fig. 3.29), similar to a dye at Chelmsford (Lowther 1948, 9), and belonging to his Group 5 'diamond and lattice'.

The tile fragments from Mucking indicate a Roman settlement of some wealth, which could afford not just a hypocaust system, but the further sophistication of a vaulted hollow roof-built of *voussoir tubuli*, and a floor or wall cladding of an unusual building component: *tegulae mammatae*. Since the excavated plan lies on poor soil, tiles provide supporting circumstantial evidence that the Romano-British settlement

must have been more extensive and included richer land, whether on the brickearth-covered slopes of the terrace, or the marshland at the foot of the hill. No other durable building materials, except for large flint nodules and chalk blocks as used in the corndriers, were noted, nor any plaster or tesserae.

Animal Foot Prints on Roman Tiles Leslie Cram

Three Roman tiles, all *tegulae*, from excavations at Mucking had foot prints caused by animals walking over the tiles while being made at the tile works which supplied building materials for Mucking. The foot prints were identified using published literature and the comparisons with the large number of such foot impressed tiles from Silchester. All the tracks were lightly impressed into the clay showing that the wet clay had been drying for some hours at least before being walked on, but not yet leather hard.

- 1) $c.370 \times 500$ (0) no archaeological context. Two dog tracks, presumed to be the hind foot, superimposed onto the other, the fore.
- 2) 381×471 (4) [67] from Saxon hut fill. Track of a dog, only the toe pads showing.
- 3) 1134×277 (1) from ditch fill. Two tracks of a cat, presumably fore and hind of one individual.

Measurements (in millimetres)			Track width
Track Length	Toe pad		length
1	39		-
26	2		46
-	26		3
24	-		13
25	23		15

The measurements of the dogs fall well within those from Silchester, where the mean track width was 40.1 for the hind foot, 48.9 for the fore. The cat is quite small; Silchester Roman cat impressions ranged from 23–50 for track length and 23–44 for track width. At Silchester and Beauport Park (Brodrigg 1979) and from the *Classis Britannica* (Peacock 1977c) dog and cat were the commonest of the animals identified from the tracks on tile and brick. *Tegulae* were second to flat tiles at Silchester in their frequency of carrying impressions. The tiles from Mucking, therefore, fit well into the picture of foot impressions on tiles from Roman sites. The incidence of foot impressed tiles at Mucking is interesting, three out of a total of ... bricks and tiles, complete or fragmentary, found. **[handwritten note: 'MATERIAL**

Fired Clay and Daub Paul Barford

The overall fired clay assemblage from Mucking is more fully described in the Prehistory Volume. Here are presented those categories of artefact that can be securely assigned to the Romano-British period.

Spindlewhorls

Seven spindlewhorls (six complete) made from re-used pottery sherds are tentatively attributed to the Romano-British period, although all could relate to the Anglo-Saxon occupation, as all were found in the upper fills of their features([Table 3.16](#)). All were recovered from the southern part of the site. The majority were crudely manufactured and abraded, varied in weight between 8g and 35g (ave. 26.3g), measured between 30mm and 54mm in diameter (ave. 33.4mm), and possessed a central perforation measuring between 3.5mm to 6mm (ave. 5.8mm).

Table 3.16. Possible Romano-British spindle-whorls.

Cat. no.	Co-ordinates		Feature	Weight (g)	Mid diam. (mm)	Perforation diam. (mm)
	Northing	Easting				
SWP42	755	360	Ditch	13	35	7
SWP44	500	675	Ditch	32	55	9
SWP47	385	153	Ditch	20	49	8
SWP61	330	325	Ditch	10	32	6
SWP63	388	525	Ditch	35	41	11
SWP65	500	680	Ditch	-	56	0
SWP102	355	144	Pit	8	30	5

Table 3.17. Romano-British oven data and phasing.

Oven No.	Co-ordinates		Dimensions (m)		Description	Phase
	Northing	Easting	Length	Width		
1	362	378	1.89	0.78	Located outside of northeast corner of enclosure RBI only flue base survived, containing charcoal and with burnt sides	Phase 1
2	1069	602	1.6	1.04	Located northwest of Well 4 in central area of DD enclosure consists only on lower parts of wall	Phase 1
3	1088	600	2.66	0.84	Located 5m north of No. 3, only flue base survived, containing charcoal and with burnt sides	Phase 1
4	5	435	-	-	Trace only	LIA/Early RB

Oven Bases

Three oven bases attributed to the early Romano-British phase were found surviving *in situ*, with evidence indicative of a fourth example also identified (Table 3.17). In two ovens, bases were preserved, whereas in the other two only the bases of flues or stokeholes survived. There was a general paucity of pottery recovered from in and around these features and a complete absence of fire-bars, thus distinguishing them from the kilns. From surviving domed fragments, diameters of the oven domes are estimated to be between 0.5m and 1.2m in width, with a thickness of between 60mm and 120mm, although thickness was variable; six pieces of perforated dome material were recovered, with perforations measuring approximately 120mm to 200mm.

Daub

A large quantity of daub fragments (minimum of 9185 fragments), many burnt and with wattle impressions, was recovered from the site, ranging in weight from a few grammes to 1.4 tonnes from a single feature (Well 4, see below); 6kg was also recovered from Romano-British Corn-drier 3 and 85kg (fragments usually less than 70g in weight) from a Roman probable gravel pit known as the Enigma (328N/500E). Most of the daub is considered to be structural or from ovens and dated primarily to the Iron Age and Romano-British periods. Fabrics, A, B and C were used in the production of daub, Fabric B being more commonly used. Rounded wattle impressions or spaces were observable on numerous examples with wattles varying in thickness between 15 and 30mm; wall thickness is estimated at between 100 and 120mm. Evidence of structural timbers was seen on several fragments and demonstrate that squared (finished) timber was used in addition to cleaved planks and hazel roundwood. Structural daub was also ‘skimmed’ with a thin veneer of clay in numerous cases. Daub from the Enigma may also represent the remains of an internal wall, possibly built directly on to a grass surface; numerous grass

impressions were observed on one fragment. Decorated and incised daub was also recovered from Well 4 (see below).

Table 3.18 provides summary data of the number of fragments of burnt clay/daub with wattle impressions by fabric, weight and feature, dominated by pits (73% of the total number and 66% of the total weight). Little daub with wattle impressions was recovered from penannular gullies or other structures and there is a distinct lack of material recovered from the Central Enclosure and the eastern-central part of the site.

Table 3.18. Summary data of burnt clay/daub with wattle impressions.

Fabric		Ditch	Other	PG	Posthole	Pit	TOTAL
A	No.	14	3			24	41
	Weight	2480	90			2190	4760
B	No.	11	5	9	3	97	125
	Weight	1230	40	400	20	7520	9210
C	No.	3					3
	Weight	930					930
M	No.					11	11
	Weight					520	520
TOTAL NO.		28	8	9	3	132	180
TOTAL WEIGHT		4640	130	400	20	10,230	15,420

PATTERNED DAUB FROM WELL 4 (C.J. GOING, P. BARFORD & G. APPLEBY, INCORPORATING NOTES BY J. EVANS)

The upper fills of the well also produced 1.4 tonnes of burnt daub, much of which was decorated with lozenge-shaped patterning ([Fig. 2.10](#)). Differential thermal analysis of 10 samples carried out by the late John Evans (North East London Polytechnic) showed the temperature of burning wood reached in excess of 600° C, temperatures that are reached only in severe conflagrations.

Much of the daub contained the impressions of organic matter. Examination of the voids, and casts of voids, revealed these to consist of impressions of wheat (*Triticum spelta*), mainly chaff. The maximum length of the impressions noted was 20–30mm; no ‘long’ (i.e. stem/leaf) fragments were observed. Voids present in the same fragments are likely to be pupae of *Dermestes* sp. (e.g. Bacon Beetle). While these may be domestic, it is more probable that parasite-infested dung was present during daub preparation – evidence strongly supported by

phosphate levels detected in the daub which, while variable, reached a maximum of 6%, and vastly exceeding levels detected in the local brickearth. The fabric is moderately hard fired and the majority is reduced. It should be noted that the daub did not always exhibit traces of organic tempering, and that the samples which did were not homogeneous. It can thus be inferred that the samples were made at different times, using different proportions of vegetable tempering, as portions of the building required replastering; daub varied in thickness between 50 and 70mm.

It was noticed that the fragments of patterned daub were '*often relatively thin... and often detached (from their backing) by a sharp tap*'. This suggests that the wattle and daub wall was surfaced with a clay facing, applied as a slurry (as observed on similarly decorated daub fragments from a building in Chelmsford destroyed by fire in c. AD 200/10; Wickenden, in Drury 1988, 84–6 and fig. 59.14, 17). This surface layer was then patterned. Patterning on larger fragments occasionally displayed lateral dislocations, suggesting the design may have been applied using a batten or roller, although this conclusion is uncertain; one of the patterned lumps was X-rayed, and revealed that voids near the surface were aligned (not clearly the case with the backing material) and that the action of applying a slurry would probably produce the same effect (see Wickenden in Drury 1988, for a discussion on these techniques). The rollers were more than 50mm in diameter, possibly up to 270mm wide, carved with a lozenge pattern with a plain border. Numerous fragments of daub also demonstrate that several dies were used, estimated to measure between 150mm and 270mm in length and c. 55mm in diameter with lozenge-shaped impressions, to produce 'roller-stamped' surfaces. These may represent decorated daub with several fragments possessing a plain zone, possibly a dido or intervening panel between patterned areas. None of the Mucking material appeared to have been plastered, and among the patterned daub from Wickford, Chelmsford, and Colchester, only one plain fragment from Chelmsford is plastered (*ibid.*). The evidence thus suggests the surface was largely left unplastered, for an application of whitewash, although no data on this point was available from the Mucking material.

Examination of the daub identified luting from between large timbers; for example, door and window frames and structural timbers. One piece also shows a distinct curved edge from an opening such as a window surround. Impressions of the wattle core and occasional timber impressions were also clearly preserved in the daub fragments with wattles measuring between 15–20mm (thin wattles) and 30–35mm. These showed that the wood used included unprepared whole and cleft underwood sprouts (traces of bark were noted). Wattles were

probably ash or elm, but one fragment of charcoal was tentatively identified as birch. It is unlikely that the daub was carried any distance. The excavator felt that the building from which it derived was probably a substantial structure, described as ‘timber framed, either post built, or with a jointed frame resting on sleeper walls, probably of the flint, chalk blocks already known from the corn-drier footings’ (Jones 1973b, 17; at the time this was thought to be a villa, although this interpretation no longer holds).

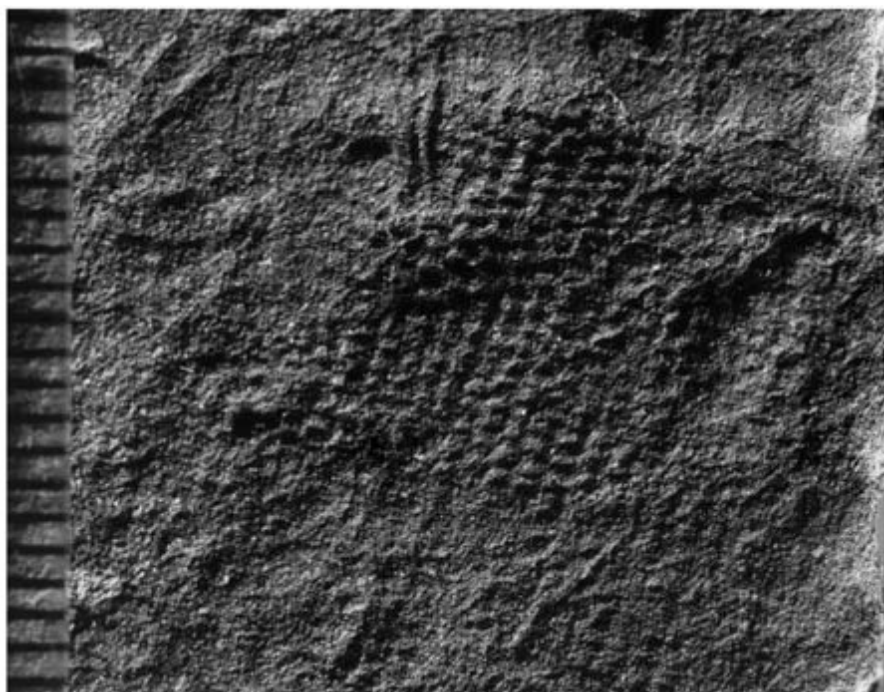


Figure 3.30. Pottery textile impression. This archive photograph simply indicates this to be a Romano-British pottery textile impression, but without detailing which actual sherd it is on. The image has been viewed by Lise Bender Jørgensen, who comments that she thinks it shows a ‘weft-faced tabby or repp’.

Textile Impressions Elizabeth Crowfoot

Aside from the textile evidence from a small number of graves in RB Cemetery II (reported on in [Chap. 4](#)), other Romano-British textile evidence is all in the form of impressions on sherds (see [Fig. 3.30](#)). These, according to John Peter Wild are uncommon

elsewhere. After seeing the example on No. 3, he wrote (letter, December 1978):

This is the first time to my knowledge that a textile impression has been noted on a sherd of Romano-British pottery. Textile impressions on Roman tiles, however, are common. In most cases it appears that the tilemaker or someone in his yard had accidentally touched or leant on a freshly-prepared tile and their clothing has left a negative impression behind (Wild 1970b, 94ff). Potters in Roman Libya producing jars in the native tradition sometimes applied a strip of woven or plaited fabric to rims and outer surfaces of their vessels before drying and firing them (pottery from Germa and Zinchecra kindly shown to me by Mr Charles Daniels). The impression on the sherd from Mucking, however, was clearly accidental and presumably occurred soon after the pot had been turned and before it had been set out to dry to leather hardness. The potter may have been using a wet rag at his work.

The Mucking impressions include a number of identifiable tabby weaves, probably flax, 'Z'-spun in warp and weft. On the two finest the high count in one system is a feature noticeable in the impressions on gypsum in burials at York (Wild 1970b, 95). Possible 'S'-spun yarns in one system on another fragment would in a Romano-British context probably suggest wool; in spite of the natural 'S'-twist of flax fibres Roman flax in Europe, like that of the Anglo-Saxons, is always 'Z'-spun. A wool tabby weave from the Walbrook has 'Z'-spun warp and 'S'-spun weft, and the same combination is suggested in the impression on a tile at Lullingstone (*ibid.*, 90, 95). All these impressions are probably the result of accidental contact with the potter's clothing or from a rag used in working, as described in Wild's note.

Mention should probably be made here of two other textile remains at Mucking. Both are on pottery from the *Grubenhäuser*, one an even tabby impression on a pot described as Romano-British (GH70); the other,

(GH4) on a Frankish pot is in a typical Roman weave, with paired threads in one or both systems (half-basket and basket weaves), bindings which, though common in wool and flax on Roman sites in Europe and the Near East, (*ibid.*, 46) have not so far been found in Anglo-Saxon weaving.

Catalogue of Sherd Impressions

1. 291N/434E. GH55, 4/4. RB sherd.

Very coarse ware, impression area 10x8mm; spinning direction of yarns not clear; weave a fine even tabby, thread count c. 6/6 on 5mm, i.e. 12/12 per 10mm; probably flax. (AML 434291).

2. 310N/510E. Small base sherd of RB pot.

Textile impressions on outer surface are 30x19mm; nothing clear. (AML 510310)

3. 445N/223E (Level 3). RBI ditch, secondary fill. Potsherd from RB storage jar.

Textile impression over area 30x19mm; part, c. 14x12mm, very clear; spinning 'Z' both yarns; even weave tabby, regular; thread count 31/12–13 per 10mm; the closer system is at this period likely to be the warp, and in this case almost conceals the other system. The fragment of cloth seems to have had a rough edge, or been torn at the corner, with two weft threads protruding. Appearance and count suggest flax. (AML 223445)

4. 752N/372E. Kiln 4. RB sherd. Outer surface.

Impression, area 8x10mm; spinning 'Z' on yarn system ?warp; other system nearly concealed, but also probably Z; weave, tabby, close ?warp-face; thread count 12–13/4 on 5mm, i.e. c. 25/8 threads on 10mm; a typical good quality ?flax weave. (AML 372252)

5. 1192N/133E. Late fill of 'Banjo ditch' (Level 5) NB 186.56. Sherd, early RB. (Cast only seen).

Textile impression, 7x7mm; threads very clear, one system noticeably finer; ?warp, 'Z'-spun, the other ?weft looser; spin not clear, possibly 'S', in which case the fabric may have been wool; weave tabby; count 6/4 threads on 5mm, i.e. 12/8 on 10mm. (AML 01331192)

6. 885N/659E. Ditch A4 (Level 4) NB 232.129. RB jar from RB ditch.

Impression of fragment of coarse 'S'-ply thread, 36mm long. At

one broken end, the two threads of the ply draw out to a point, at the other the cut ends lie across each other, pointing in different directions. The fibres are not clear, but occasionally visibly Z-spun; the impression is not clear enough to suggest the fibre, and this could be wool, hemp or coarse flax. The shortness of length indicates a scrap of thread in accidental contact, not one used deliberately to produce a decorative line.

7. 454N/479E. GH70. NB 73.6. Impression on RB pot.

Faint traces of textile over an area c. 13mm long, 7mm wide, with a small clear area at one edge. As far as can be seen the yarns were both 'Z'-spun, the weave tabby; count estimated c. 12/12 on 10mm, (taken as 6 on 5mm/3 on 2.5mm). The first ? warp thread is uneven, the ?weft rather thicker.

8. 2444N/1105E. GH205. On Frankish pot.

Impression of weave, area 20x8mm. The coarse grain of the pottery makes it impossible to see the spinning direction in the yarns, but they are fine, used paired in one, and possibly both systems, *i.e.* half-basket or basket weave; thread count 4 prs/6? prs on 5mm.

Economic Data

As outlined in [Chapter One](#) and discussed in greater detail in the Prehistory Volume, the site's economic evidence is unfortunately weak. This is partly attributable to the acidic soils of the terrace-gravels, which evidently seriously impeded bone survival. Moreover, whilst a large number of bulk samples were collected, few were ever processed. (These are still retained in good order in the British Museum's stores and could, in theory, still be analysed.)

Within the site's notebook catalogues are occasional mentions of examined economic material, comparable to Cooper's report on a single pit's mollusca included below. There is one that records Marijke van der Veen identifying a fragment of an ear of barley from Kiln 4, with five grains apparently still *in situ*. Stuck into the same Small Finds Notebook (No. 17A) is also letter

from her (01/06/82) reporting on the cast of a fern impression found on a Romano-British pot, apparently recovered from the ‘Enigma’ hollow. She concludes it to be either *Thelypteris limbosperma* (All.), *Thelypteris palustris* or *Dryopteris felix-mas* (L.); explaining that, only able to view one side of its impression, she cannot differentiate between them.

Indicative of predominantly grassland conditions, only one pollen core was ever assessed, that being from the North Enclosure’s circuit (see Greig in Prehistory Vol., chap. 5). Yet, given the size and number of the site’s granaries – both Iron Age and Roman – as well the scale of its quern assemblage (see Buckley & Major, above), there can be no doubt of the arable basis of Mucking’s economy.

Animal Bone Krish Seetah and Geraldine Done

This report concerns the site’s recorded Romano-British faunal sample. Geraldine Done originally recorded the material; this report is derived from her original dataset, *not* re-analysis of the bone. The assemblage as a whole was substantial and totalled some 5293 assessable fragments; 3207 were identified to element and species group (60.6%), with 2038 (38.5%) further identified to species. This report will briefly outline the methods used for analysing the material, followed by the results elicited and discussion thereof.

Unlike a conventional zooarchaeological appraisal of a bone assemblage, this report has relied on the interpretation of a dataset originally recorded some 25 years ago. Clearly one needs to take into account developments in the methods and techniques used to study animal bone over this period of time, as well as the less tangible, underlying drivers that direct how bones are analysed. The latter is

not an area to explore in this report; however, a number of methodological points require clarification. The first is the general ordering and naming of the various categories originally recorded, and how these relate to the ones more commonly used today. As methods of analysis have become more streamlined, particularly in light of developments in computing and the use of databases, there has been a reduction in the number of categories to which species and species groups are assigned. Thus, for this report the following groups have been re-defined:

Table 3.19. NISP and MNI counts for all sites and species.

Species	NISP	%NISP	MNI
Cow	1231	60.4	43
Ovicaprid	305	14.9	6
Pig	108	5.3	7
Horse	214	10.5	4
Dog	37	1.8	2
Cat	2	0.09	1
Red deer	21	1	1
Fallow deer	1	0.05	1
Rabbit	115	5.6	5
Hare	1	0.05	1
Domestic fowl	3	0.14	1
Goose	1	0.05	1
ULM	1011	31.5 ($\Sigma=3207$)	-
UMM	142	4.4 ($\Sigma=3207$)	-
UUB	16	0.5 ($\Sigma=3207$)	-
UUM	2086	39.4 ($\Sigma=5293$)	-

Key: UMM & ULM = Unid. Medium and Large Mammal / UUM = Unid. Fragment. NB: Species percentages are out of 2038. These differ from the unidentified counts as these are calculated on the basis of element identification (for UMM & ULM) and total fragments (for UUM) (corresponding to Σ in brackets).

As used by Done, Categories CFG, LAR, H/O, LMM and DER (refer to original database for definitions), all of which denote large mammals that cannot be assigned to a specific species, have been re-grouped under the abbreviation ULM (Unidentified Large Mammal).

In similar fashion, SFG, SAR and SMM (all of which denote medium sized ungulates that cannot be assigned to a specific species) have been re-categorised as UMM (Unidentified Medium Mammal).

Finally, DUB, U/D, O, UMM and RUM (denoting fragments that could not be assigned to species or element group) have been assigned to the UUM (Unidentified Mammal) group.

When calculating the actual numbers of fragments, and defining the minimum number of animals, it has been assumed that each record accounts for one fragment. Exceptions to this occurred when a specific number of fragments had been included, for example, in the comments category. Modern methods for calculating the minimum number of animals rely on pre-defined 'diagnostic zones' for each element (Dobney & Reilly 1988). This, combined with siding information, gives an estimate of the minimum number of individual animals represented in the assemblage. In the absence of zoning data the MNI (Minimum Number of Individuals) has been calculated from the humerus (and metacarpals for the horse).

Unfortunately, little can be directly reported regarding the state of preservation of the assemblage. However, by inference, it can be suggested that the condition of the bone was suitably undamaged for recognition of butchery, burning, pathology and other taphonomic changes.

Domestic animals were the most abundantly recovered fauna. Cattle were overwhelmingly the best represented of the 'food species' within the context of NISP (Number of Identifiable Specimen) accounting for 1231 fragments, or 60.4%, of the overall identified assemblage ([Table 3.19](#)). Ovicaprids were also recovered in significant numbers, with 305 fragments (or 14.9%). Pig was the least well represented, accounted for by 108 fragments (5.3%). The MNI for these species is arguably more representative and was calculated as showing at least 43 individual cows, six ovicaprids and seven pigs respectively.

Horse was a surprising component of this assemblage, with 214 fragments recovered and constituting ten percent of the identifiable faunal remains. This count is nearly twice that of pigs; however, the high fragment count is unrepresentative as only four individual animals were calculated for the MNI calculation. Other nonfood domesticates were also represented with both dog (37 fragments/1.8%, MNI of two animals) and cat (two fragments/0.09%, MNI of one individual) present.

Red and fallow deer, rabbit and hare represented wild species. A possible roe deer was also recorded. A small number of bird bones were also recovered: three fragments of domestic fowl, as well as one of goose. No fish or small mammal remains were noted.

This assemblage has provided some interesting results. The marked dominance of cattle has been reported at a number of other sites. However, in this instance the relatively well-represented ovicaprid component seems to indicate a mixed-husbandry management strategy. This point having been made, it is a mistake to over-emphasise the ovicaprid component. The cattle cohort is significantly larger, and, due to the obvious size difference, cattle would also have been the most significant provider of meat. The presence of ovicaprids would seem to be supplemental to the resources available from cattle; namely wool. Unfortunately, the ovicaprid elements that have been recovered, whilst representative of the whole carcass, have not lent themselves to unbiased identification of whether the animals were sheep or goats, this being a common issue in zooarchaeological analysis. Goats were present on site, as noted from two definite goat horn-cores. Unfortunately, this does little to resolve the proportions of these two species within the assemblage. This is problematic only in the sense of giving a clearer notion of the economic and ecological situation of the site: are we dealing with environmental conditions favouring sheep husbandry (i.e. relatively dry with grazing) or goats (less specialised). Considering the dominance of cows it might be suggested that goats could have been little other than a mechanism for recycling waste food. Sheep on the other hand provide wool and it is probable that the small-scale sheep husbandry took place to provide this commodity.

Considering that this assemblage dates to the Romano-British period, it is somewhat surprising that pig constitutes such a small proportion – just over five percent – of the recovered bone. Pig is generally considered ubiquitous on Roman sites, particularly urban enclaves. Exceptions to this have been noted on rural sites, and those that are in a state of transition from the Iron Age to the Romano-British. Clearly, considering the phasing of the recovered material, the low numbers of pig is therefore to be anticipated.

Although ageing data had been recorded in the form of both epiphyseal fusion and toothwear/ eruption data, time and available resources precluded a clear kill-profile from being established. Thus, it was not possible to infer whether the management strategy in place for cattle was based on dairying or meat exploitation, or if cattle were transported to the site as live animals and then butchered. Understanding the management strategy employed for sheep and pigs would also have benefited from a clearer appraisal of the ageing data. This would have clarified whether wool was a focus for sheep husbandry; in other words, an assemblage dominated by older individuals and juveniles, but with few ‘prime meat’ young adults. As pigs are invariably raised solely for meat, ageing data would have contributed little to understanding the mode of exploitation for this species. However, age profiles would have assisted in illuminating whether they were indeed *raised*, or were semi-feral and occurred on site incidentally, taking advantage of waste food.

The relatively high proportion of horse deserves discussion. It would be a mistake to over-infer from

what is effectively a small sample given the MNI count but, nevertheless, the proportion of horse bones recovered is unusual. While it might be assumed that the horse was found in high numbers due to its economic significance as a beast of burden and for traction, this is not a clear-cut issue. It has been suggested that cattle, rather than horse, would have been the more important beast of burden until Medieval times when improvements in horse morphology, and harness technology, led to larger, more effective, working animals (Langdon 1984). Indeed, metric data from this site indicates animals that were between 12 and 14.2 hands, denoting ponies rather than horses. These animals would have been small in comparison to later examples. Thus, the presence of horse needs to be taken in context. It is possible that whilst they certainly could have been used to provide power, there may be another explanation for their presence, one that is yet to be elucidated, but may involve consumption (either by humans or dogs) as butchery was recorded on horse bones. The presence of red and fallow deer, as well as hare, pays testament to some exploitation of wild resources at Mucking. However, wild boar was not noted and overall, considering the size of the assemblage, the wild component is somewhat impoverished in terms of diversity of fauna.

The bird component, though small, is problematic. The goose bone (one fragment) does not merit further discussion. Done, though, recorded three domestic fowl bones, which were all recovered from the upper fill of a later Bronze Age pit, while zooarchaeological evidence suggests that domestic chicken arrived in

Britain with the Romans. Finds of chicken noted on early sites are considered intrusive (Albarella *et al.* 2008), and this may be the case here. A similar issue is relevant to the rabbit finds. This species was found in relatively significant numbers; however, while a number of rabbits were assigned to the modern period (indicating obtrusive specimens) the majority derived from Romano-British features, or even prehistoric in some cases. Rabbits are considered a Norman introduction, with very little evidence to suggest that this species was present in the Romano-British period. The burrowing behaviour of rabbits, and that these were generally found as complete or near-complete skeletons, suggests them to be intrusive in the features in which they ultimately died. (Unfortunately, metrical re-analysis of rabbits is not possible, as this data was not collected; this would have clarified whether we had smaller southern Mediterranean examples – which would support a Roman identification – or larger animals, indicating intrusive finds.)

Industry and craft specialism is evidenced from both the horn and antler finds, as well as the indications of butchery. Cut-marks were noted on 56 bones, the overwhelming majority found on cattle (46 records). The butchery technique evidently favoured use of the cleaver, typical of the Romano-British period. In total some 44 fragments of horn-core were recovered, along with 79 fragments of antler (see [Fig. 3.42](#) and *Distributions and Case-studies*, below). Not surprisingly, considering the dominance of cattle in this assemblage, cow horn-cores constituted the largest component, with 35 fragments (plus three possible

cow horn-cores) recovered. Only one fragment of antler was recovered from fallow deer, the remainder was either from red deer, or unspecified deer species.

Mollusca from Pit 373N × 407E J. Cooper

A sample of the large quantity of shell found in this feature was submitted for examination. Several mollusc types were present, and their identifications are given in [Table 3.20](#).

The molluscs within the deposit are not uncommon, and could well be found living in the Thames Estuary today or composing the shell banks which can be found in the region of Leigh Beck, some 10km to the east of the site. It is difficult to imagine a use for this material other than as temper for pottery. However, such evidence as there is suggests a third-century AD date for the pit that, it should be noted, appears to be later than that of the floruit of the early shell-tempered pottery made on the site.¹³ However, examination of the shell-impressions of the sherds themselves permits the tentative identification among them of bivalves represented here (e.g. *Macoma balthica* and *Mytilus* sp) and suggests strongly that both shell assemblages derive from a similar source.

Table 3.20. Molluscs from Romano-British pit 373N/407E.

Bivalves	Common name
<i>Barnea</i> c.f. <i>parva</i> (Pennant)	Little Piddock
<i>Cerastoderma edule</i> (Linnaeus)	Common edible cockle
<i>Macoma balthica</i> (Linnaeus)	Baltic Tellin
<i>Mytilis</i> c.f. <i>edulis</i> (Linnaeus)	Common Mussel
<i>Scrobicularia plana</i> (da Costa)	Butter fish
Gastropods	Common name
<i>Hydobia ulvae</i> (Pennant)	Laver spire shell
<i>Littorina rudis</i> (Maton)	Rough periwinkle

Carbonised Grain from Corn-drier 3 Marijke van der Veen

During the excavations, three Romano-British corndriers were discovered, all probably dating to the later second or third century AD. From one of them a small amount of carbonised plant material was collected for analysis. The material came from Corndrier 3, which lay next to CD4 and the sequence of the surrounding gullies suggests that one succeeded the other (see above, 'The Corn-driers'). The sample came from the later of the two structures, which cut through a Romano-British field ditch, and in turn is cut by GH21. Pottery from CD3 gives a post mid-Antonine date (i.e. mid third-century AD), with a complete samian f31 stamped by Minutus, dated to the later second to early third century which suggests it was in use not before c. AD 190–200. The corn-drier was 'L'-shaped, and had a large floor area, a stokehole, and a flue following two sides of the floor area. The structures were surrounded by what seemed to be a floor of rammed clay lying between the flue walls and the surrounding gullies. It was from the destruction material on this floor that the carbonised plant material came (Margaret Jones, pers. comm.).

The sample of carbonised plant remains was c. 90ml in volume. It contained no mineral matter and flotation was therefore not required. The sample was sorted under the microscope using 15x magnification. For the identifications, magnifications of up to 50x were used. The sample consisted almost entirely of grains, chaff and weed seeds; virtually no wood charcoal was present. Listed in [Table 3.21](#), only the better preserved items were identified. A large part of the sample, c. 40ml, consisted of very broken-up fragments of cereal grains, chaff and grass caryopses. As these fragments appeared to belong to species already identified from better preserved specimens, no attempt was made to identify and count these small fragments. Consequently, the

numbers in [Table 3.21](#) represent minimum numbers only, and not the total number present.

Table 3.21. Number of carbonised plant remains from ‘corndrier’ 3.

<i>Triticum spelta</i> , grains (germinated)	1000 +
<i>Triticum spelta</i> , grains (not germinated)	c. 75
<i>Triticum spelta</i> , glume bases	800 +
<i>Triticum spelta</i> , rachis internodes	14
<i>Triticum</i> sp. grains	350 +
Detached coleoptiles (sprouts)	900 +
<i>Hordeum vulgare</i> , grains (germinated)	2
<i>Hordeum vulgare</i> , grains (not germinated)	2
Cereal straw, culm nodes	6
<i>Avena</i> sp., caryopses	150 +
<i>Avena</i> sp., floret bases	2
<i>Avena</i> sp., awn fragments	3
<i>Avena fatua</i> , floret bases	6
<i>Avena</i> c.f. <i>fatua</i> , lemmas	6
<i>Bromus mollis/secalinus</i> , caryopses	250 +
<i>Chenopodium</i> sp. (without testa)	2

<i>Rumex acetosella</i> (sheep's sorrel)	2
<i>Rumex</i> sp. (dock)	5
<i>Spergula arvensis</i> (corn spurrey)	1
<i>Vicia/Lathyrus</i> (vetches)	2
<i>Poa annua</i> (annual meadow grass)	1

Results

The sample consisted largely of remains of spelt wheat (*Triticum spelta*). At least 1000 germinated grains were present. In most cases the germination (degradation or modification of the endosperm) had progressed up to 30–60 per cent of the grain, though in some cases the coleoptile had only just started to grow. About seven per cent of the grains showed no sign of germination. A large number of fragments of wheat grains were found. They probably represent the fragments of fully germinated grains. Many detached coleoptiles (sprouts) were present. They will have been broken off the grains during charring, or subsequently when the grains were removed from the kiln.

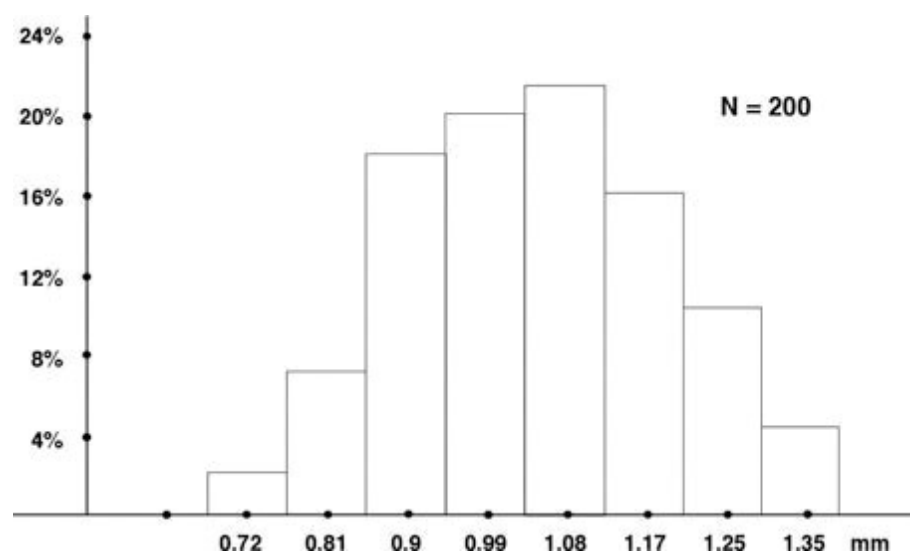


Figure 3.31. Chart showing glume widths at the level of spikelet articulation for material from the corn drier.

A large number of glume bases of wheat were present. Their venation pattern (strongly developed primary keel, prominent tertiary veins) and the angle between the glume faces (greater than 90° on either side of the primary keel, but no angle present on either side of the secondary keel) was characteristic of spelt wheat (*Triticum spelta*). The measurements of the glume width at the level of spikelet articulation are given in [Figure 3.31](#) and they correspond closely to those of spelt wheat given by Helbaek (1953).

Four barley grains were present. They showed parallel ridges on the dorsal surface, and three of the grains were twisted, lateral grains. The barley can, therefore, be identified as six-row, hulled barley (*Hordeum vulgare*). Two of the grains had germinated.

A relatively large number of grasses was present. Brome grass (*Bromus mollis/secalinus*) is a very common arable weed, as is wild oat (*Avena fatua*). Six of the eight floret bases of oats possessed a large oval articulation scar and were identified as belonging to wild oat. The others were too fragmented to allow identification. The lemmas of oats were very rugose, which tends to be a characteristic of wild rather than cultivated oats. A small number of oat grains (c. 6) had started to germinate, as had around eight caryopses of brome grass.

A few fragments of cereal straw were found, all culm nodes. The only other species present are all small weed seeds: *Chenopodium*, *Rumex*, *Spergula arvensis*, *Poa annua* and *Vicia/Lathyrus*. These are all common arable weeds.

The date of Corn-drier 3 is later second to early third-century AD, which compares well with other corn-driers found in Britain. While there are a small number of such features dated to the first and second century AD, the vast majority belong to the third or fourth century AD (Morris 1979). Their distribution is restricted to southern and eastern parts of Britain, with a cluster in Humberside forming the northernmost record (*ibid.*). The distribution does not appear to be caused by a bias in recovery. Corn-driers have been described as the most easily identifiable agricultural structures found in Roman Britain (*ibid.*; see also Taylor 2007, fig. 7.3).

The following functions for corn-driers have been

put forward (Morris 1979, Monk 1981, Hillman 1982):

- 1) The drying of whole ears, or even sheaves, especially after a wet summer. It has often been suggested that this practice was necessary in northern and western parts of the country because of the wetter climate and shorter growing season in these areas, and a number of historical references mention this practice. However, if this was the case, we would expect a concentration of corn-driers in those areas. The near-absence of corn-driers in northern and western regions of Britain implies that climatic conditions did not form a major factor in their development.
- 2) The parching of fully-ripe spikelets of emmer or spelt wheat in order to render the glumes brittle and facilitate their removal by pounding and subsequent winnowing. This could also have been applied to free-threshing cereals such as hulled barley and oats, to facilitate the removal of the lemmas.
- 3) The drying of fully processed grain to harden it prior to milling; soft grain can clog up the querns.
- 4) The drying of fully processed grain prior to bulk storage in order to dry the grain sufficiently to prevent spoilage (germination or insect attack), or to kill any insects already present.
- 5) The roasting of germinated grain to stop the germination process when the starch has been converted into sugar; a process used in the brewing of beer.

The internal composition of the samples can often be used to determine which of the possible functions listed above is represented by the charred plant remains found associated with the corn-drier. It is important to realise, however, that each sample represents only one event and that these structures may well have been used for more than one function (for a review of the botanical evidence from Roman corn-driers, see Van der Veen 1989).

The ratio of spelt grains to glume bases in the live plant is more or less 1:1. In the Mucking samples this ratio is 1:0.6. Allowing for some damage and loss

during the charring process and especially during the removal of the grain from the drying chamber, this suggests that the grain brought into the corndrier was still enclosed by its glumes (i.e. that it was brought in as whole spikelets). The virtual absence of small weed seeds, combined with the presence of relatively large amounts of large weeds (e.g. brome grass and wild oat, which are of a similar size to cereal grains) would suggest that the sample represents semi-cleaned spikelets of spelt wheat. The few barley grains are contaminants from a previous year's crop.

An alternative explanation is that the chaff represents the remains of fuel used in the stokepit, which at a later stage had become mixed with the grain from the drying chamber. Chaff, straw and probably other harvest by-products, such as weed seeds, were frequently used as fuel. In fact, straw and chaff together with some wood and/or peat was the favoured fuel for malting (Hillman 1982). The stokepit will have been cleaned out regularly, and the ashes containing chaff, weed seeds *etc.* will have become mixed with the discarded remains of accidentally over-roasted grain. However, the virtual absence of wood-charcoal in the sample would suggest that it contains no fuel.

The fact that almost all the spelt grains had germinated prior to charring suggests that the grain had been deliberately germinated, almost certainly for the production of malt. It is possible to use whole spikelets for malting rather than free grain, and this would have saved the labour-intensive operations of pounding and winnowing to remove the glumes (Hillman 1982).

Malt is produced in the following manner: the grain is soaked ('steeped') in water and then turned out on a floor in a heap or 'couch'. The grain germinates – a process known as 'chitting' – when the starch has been converted into sugar, the germination process is stopped by putting the grain (now known as 'green malt') into a kiln and roasting ('curing') it with hot air. This produces the malt, which forms the brewer's main raw material (Corran 1975).

The use of spelt wheat for malting was also recorded at Catsgore, Somerset (Hillman 1982). Today only barley is used for brewing beer. Historical evidence seems to indicate that barley has always been the most important cereal in the brewing industry, but there are nevertheless frequent references to the use of other cereals, such as wheat, rye and oats. For example, in the Domesday Book it is mentioned that at St. Paul's Cathedral the monks brewed 67,814 gallons of ale from 175 quarters each of barley and wheat, and 708 of oats (Corran 1975). In a herbal, quoted by Corran (1975), directions were given for brewing beer: "They take wheat, barley, spelt, rye or oats, either one kind (for good beer can be prepared from all these cereals) or two or three together...". Reviewing the various regional beers the same book says: "English beers are also extraordinarily good, especially English ale brewed from wheat" (Corran 1975, 48–9).

In its ground plan the Mucking 'corn-drier' CD3 is very similar to the one found at Foxholes Farm, Hertford (Goodburn *et al.* 1976). The latter formed the model for a reconstruction at Butser Ancient Farm, which was used to test the validity of the

interpretation of these structures as corn-driers (Reynolds and Langley 1979). After a series of experiments the following conclusion was reached: "Unless the grain is spread so thinly on the floor as to be uneconomic of time and effort, the mechanics of these structures with their solid floors are such that they cannot be considered to be effective for the purpose assigned to them" (Reynolds 1981, 43).

Instead, an alternative function was put forward, suggesting that these structures were used as malting floors. Again, experiments were carried out, and the resultant malt was found to be quite suitable for the manufacture of an ale (Reynolds & Langley 1979; Reynolds 1981). The evidence from Mucking corroborates the suggestion that these structures could be used as malting floors. However, it is important to point out that botanical evidence from other corn-driers has provided evidence for the drying or parching of grain (Van der Veen 1989). The so-called corn-driers were almost certainly multipurpose buildings, used for the production of malt and for the drying or parching of grain.

Discussion – *Distributions and Depositions*

Clearly there are interesting facets of the period's artefact assemblages. Leaving aside for the moment issues relating to the character of the site's Late Roman/earliest Anglo-Saxon usage, these would range from its Roman pottery graffiti and 'batchmarks' and the scale of organisation of its pottery production, to the sources of its military metalwork and, perhaps foremost, the extraordinary character of the Well 4

finds assemblage. Although the latter will receive some contextual appraisal/'re-assembly' here, many issues can only be appropriately addressed following presentation of the cemetery data, with any final resolution left to [Chapter Five](#)'s broader discussion.

While many finds are certainly noteworthy amongst the cemeteries' grave-goods – for example, the eagle-headed finial from Cremation 902 or 911's charred date stones and 11 lamps (see [Chap. 4](#)) – arguably amongst the site's most significant finds would have to be one of its most ephemeral and fragile traces. This is the Roman-weave textile impression that, as related by Crowfoot above, was identified on one of the Anglo-Saxon/'Frankish' pots (No. 8: 2444N/1105E, GH205).¹⁴ It speaks of curation and resonates with other 'lingering' textile finds: think for example of the tunic belonging to Akhnaton that was recovered wrapped around an Anubis status in Tutankhamun's tomb-treasury (Vogelsang-Eastwood 1999) or the centuries-old raiments preserved in Europe's cathedrals.

Distributions

This volume could almost serve as a 'pattern book' of period-related artefact distributions. The potential of its many grid-referenced artefact databases amply justifies the site's intensive excavation policy and the computerisation of its assemblages, as was intended by the Joneses.

Distribution plots have already featured within this volume ([Fig. 1.12](#)) and its final chapter will include still more. At this point we will largely confine

ourselves to the implications arising from broad-scale plottings. We will be selective here, although the wealth of the site's databases is such that a multitude of other artefact distributions could be attempted.

We will start with those presented in this volume's first chapter (essentially included there in demonstration of the impact of the quarry-works on area-recovery rates). That showing rotary quern fragments must attest to the much greater intensity of occupation *per se* within the area of the South Enclosures, as opposed to the Central and Western Enclosures (Fig. 1.12). That figure's other plot indicates a general co-relationship between firebar pieces and the location of the site's pottery kilns. Yet, while the latter two distributions are similar, they are not perfect matches: the firebars extend beyond the kiln cluster-areas, especially north of the Western Enclosures and within the North Enclosure (as discussed in the Prehistory Volume this may, therefore, suggest a degree of later prehistoric pottery production).

Also featuring in that chapter is Figure 1.16's 'total' Roman pottery plot (but which excludes cemetery grave-good occurrences). Its relevance is two-fold. Its marked 'gaps' or 'stoppages' must indicate where the material's computer cataloguing was left incomplete (e.g. the paddocks west of the north end of the Central Enclosure). Equally, its distribution north along the 'spine' boundary-ditch and around the perimeter of the North Enclosure surely attests to a degree of usage of the latter in its then-surviving earthwork form, despite it having no evidence of Roman settlement.

Next to consider is Figure 3.32's coin plot (whose

overall scarcity directly reflects the lack of metal detecting). It clearly shows the relatively high numbers recovered from the site's southern quarter (this despite the greater level of quarry-disturbance that area witnessed). While this must be partly reflective of the much greater feature-density throughout that part of the site, the coins that are dominant in the southern portion are Late Roman, with the majority of the fourth-century issues found there. Directly relating to questions of the site's Late Roman/earliest Anglo-Saxon 'interface', the implications of this will be further explored below.

The metalwork plot (Fig. 3.32 right) shows that Roman-attributed ironwork was widespread throughout (nails having been omitted). The lead is equally dispersed, but of a much lower density. Indeed, that so little was present could suggest that it had been intentionally collected and recycled by the site's post-Roman inhabitants (see below), with the only marked 'high' being from Well 4. That feature also had a remarkable copper alloy assemblage – 64 pieces in total. Otherwise, such material shows localised concentrations in the south of the site; in many cases this relates to Roman metalwork occurring in *Grubenhäuser*.

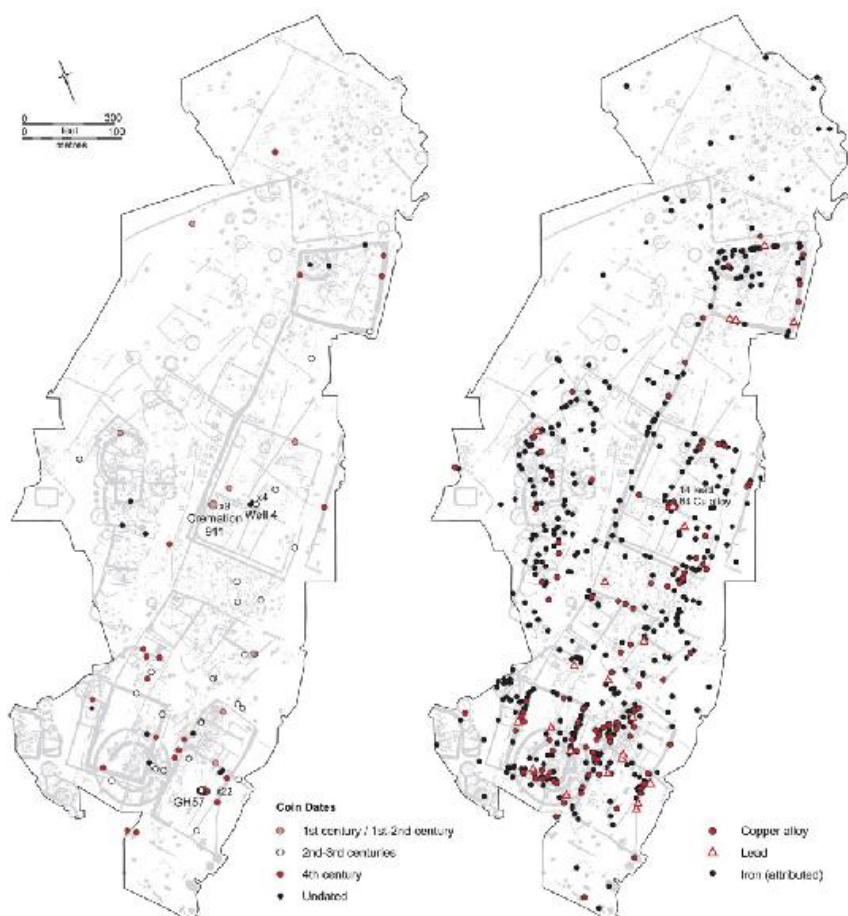
In demonstration of what was intended by the Joneses, the plots on Figure 3.33 are taken from original MPX print-outs (but for clarity set against our base-plan background). The upper tile distribution shows how widespread the material was (see also Fig. 5.11 for detail); especially noteworthy is, again, the frequency in the upper profile of the North Enclosure's perimeter.

That smithing slag plot (Fig. 3.33 middle) also includes prehistoric and Anglo-Saxon data (see Prehistory Vol. fig. 5.15 for distribution of tap and hearth slag pieces). Localised concentrations are apparent at points along the Southern Enclosure's ditch axes. In total, 390kg of iron slag and residues were recovered from the site, of which approximately 60% was stratified. In his analyses McDonnell (1993) highlighted four areas of Romano-British ironworking (Fig. 3.33, 1–4), with four other concentrations either of that or later date identified (5–8). The first of these (No. 1) saw 3.9kg of smithing and dense iron silicate slag, whereas the fourth – Well 4 – yielded 13kg of smithing slag. The most distinct concentrations were along the ditches of one of the West Enclosure paddocks (Nos. 2 & 3), where 28.6kg of smelting and smithing slags occurred. The four other areas (5–8) produced, in total, a further 37.8kg. Taken as a whole, the evidence led McDonnell to conclude that while smithing activity certainly occurred on the site in Roman times, there is no indication of it having been particularly intense.

Figure 3.33's lower plot shows the location of the site's ox/cattle bones. Plots of all of the main animal-species bone are to be found in the Prehistory Volume (figs. 5.20–1). In this case, like the others, reasonable numbers occur within the area of the Southern Enclosures. What these largely attest to, unfortunately, is that not all of the material was apparently ever recorded, with very little within the ABC, Central and Western Enclosures.

Of Figure 3.34's plots of individual pottery types, it is the samian that has the widest distribution.

Incredible quantities of both samian and mortaria were recovered from Well 4. It is the latter ware that shows the most marked concentration within the site's southern quarter, with relatively little overall within the Central Enclosure and almost none from the Western Enclosures. A final point to stress, and which is especially evinced in both the amphora and samian plots, are the consistently high densities along the site's eastern margin, particularly along the ditchline that flanked the Central Enclosure; this clearly indicates that the Roman settlement core extended further downslope in that direction.



While at risk of stating the obvious, we must recognise how these distributions differ from the plots of the site's pottery-related production. Whether it is that of the firebars ([Fig. 1.12](#)) or the 'batchmarked' vessels (see [Fig. 3.36](#)), and roughly corresponding to the kiln locations, those instead focus on the Western and Southern Enclosures, only seeing slight scatters within the Central Enclosure.

As touched on [Chapter Two](#)'s Phase 3 section, the final distributions to be included at this point are [Figure 3.35](#)'s later Roman pottery plots. Of 'generic' later third–fourth-century attribution (as opposed to [Fig. 3.43](#)'s specifically 'Late' types and their greater concentration), these occurred only rarely within the Central Enclosure but were instead focussed on the Southern Enclosures. Their overall numbers (see also below) and general spread must attest to that area's 'lingering' settlement throughout that time.

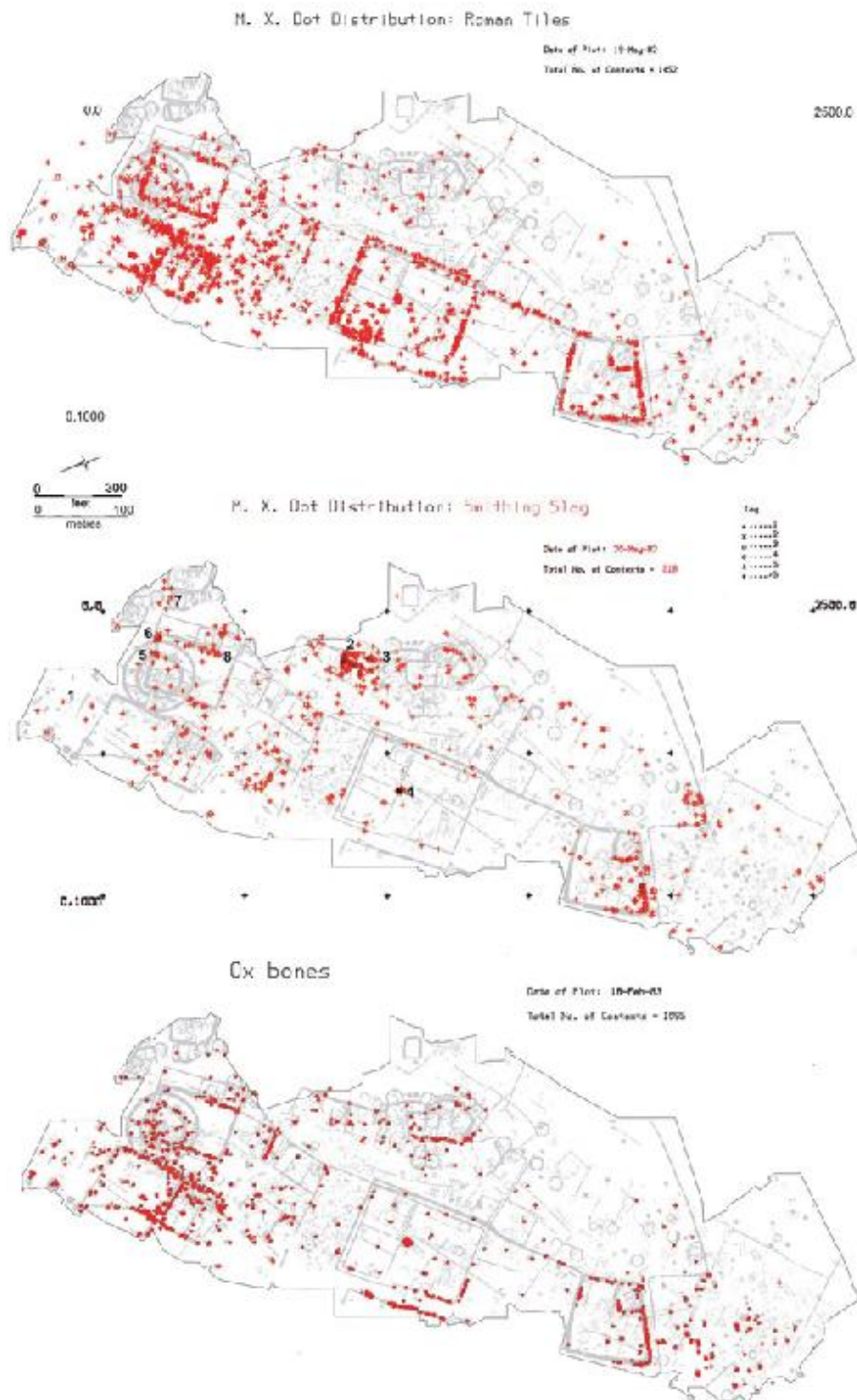


Figure 3.33. Distributions (II; MPX-generated): tile, slag and ox bones.



Figure 3.34. Distributions (III): pottery – amphorae, samian and mortaria.

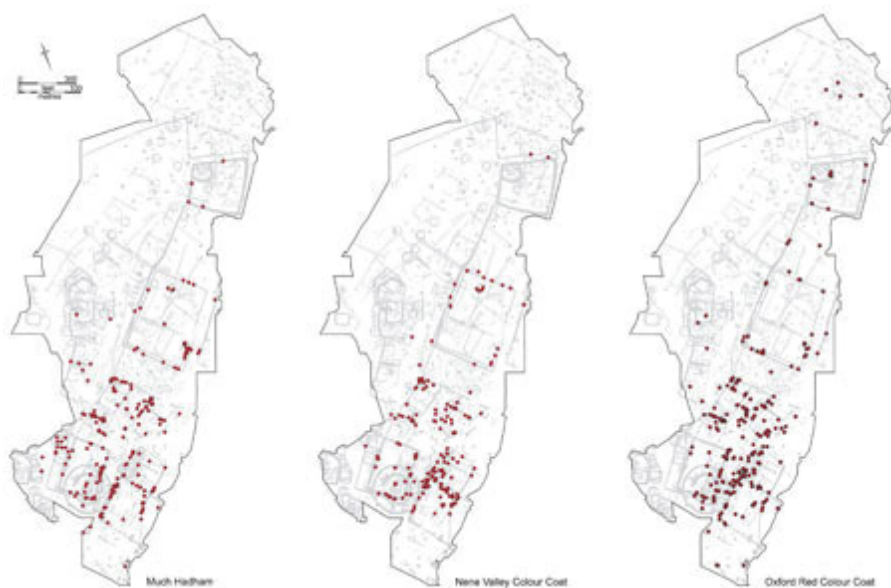


Figure 3.35. Distributions (IV): later Roman pottery – Much Hadham,

Depositional Case-studies

In an effort to show the potential wealth of Mucking's data-sets and to interrogate themes of site dynamics in greater detail, three case-studies will be now be presented. The first concerns the site's 'Mucking-style graffiti' or vessel 'batchmarks', and its other graffiti. Primarily undertaken in order to see if there was any relationship between their motifs and the site's kilns, in many respects this study is comparable to the distributional analyses of the later Iron Age marked pottery bases offered in the Prehistory Volume ([chap. 5](#)).

The second case-study further explores the extraordinary character of Well 4's assemblage and the manner of that feature's depositional infilling. The last study is somewhat more wide-ranging, but its implications for the site's Romano-British settlement are great: the impact of the site's subsequent Anglo-Saxon occupation. While the dating and nature of the latter will have to be returned to in the last chapter, these issues nonetheless require airing here.

Before proceeding, it should be emphasised that these case-studies are intended to highlight important facets of the site's depositional behaviours. Involving issues of artefact recycling/collection and what is, in effect, the impact of acculturation on material culture, the final case-study deals with matters of enormous complexity. Yet, so too does the first, graffiti-related study. While distributional propensities

amongst the various ‘markings’ can be distinguished, the dynamics of the site’s refuse management clearly eroded clear links between the many pottery ‘batchmarks’ and the site’s kilns. It is only really with Well 4’s huge-scale deposition – arguably reflecting the redeposition of much of a household – that we find a sense of clear assemblage attribution. It is entirely appropriate that this great feature receives such attention, both due to its interpretative possibilities, but also because amongst Mucking’s vast finds assemblages the qualities of its ‘special things’ can too easily become lost within the site’s ‘mass’. This must also make us reflect upon how inter-site comparison is conducted; if, for example, a site’s samian percentage is used as a comparator, then the distinct character of specific phases and features can easily be overlooked.

Pottery Batchmarks and Graffiti

The site’s various forms of ‘marked’ pottery were first published by Margaret Jones in 1972 (who there seems to have greatly overestimated their numbers; see [Fig. 1.4](#)) and have been described by Going above (see also Going 1987). Here we will confine ourselves to issues relating to their distribution ([Fig. 3.36](#)). Citing Cunliffe’s earlier distinction of ‘batchmark’ motif-types at Fishbourne, Margaret Jones was clearly aware of the potential of such approaches:

It seems surprising, if these are indeed potters’ batch marks, that they have not been more commonly featured in groups of Romano-British coarse pottery. *Perhaps their noteworthiness at Fishbourne and at Mucking is one of the dividends from handling the large collections of pottery consequent on the ‘big dig’ tendencies of recent years. In both cases their distribution is seen as a significant factor.* Perhaps more maps of unequivocal characteristics such as these might help meet a need to make Romano-British coarse pottery studies a little more digestible (Jones 1972, 337; emphasis added).

A total of 118 sherds were recorded as being thus marked ([Fig. 3.27](#)); a number of these were evidently not drawn and so their motifs

cannot now be attributed. The most frequent marking is, by far, the 'cricket-stump' pattern and it occurred across both the Western and Southern Enclosure-areas, with a similar spread apparent for both the diamond- and cross-motifs. Despite their partial record, a few distributional propensities are nevertheless apparent. In the Southern Enclosures, this includes the four (-only) 'stump'-motif sherds that cluster by Kilns 4/16, with two-/ three-'dot' motif clusters in the vicinity of the Western Enclosures' Kilns 19–22, and a loose concentration of diamond-motif sherds adjacent to Kiln 11. That said, tightly grouped in the area of the Western Enclosure's Kiln 6 were sherds with all of the main motif-types: cross, diamond and 'stumps'. While, therefore, this was an entirely justified exercise, there seems no grounds for positing a one-to-one relationship between the site's pottery batchmark motifs and its individual kilns.

The other types of vessel-marking – its literate/figurative and numerical/'mark' graffiti – occurred in almost equal numbers within the area of the Southern and Central Enclosures, with only one in the Western Enclosure-area (Fig. 3.36.13). Intriguingly, the literate/figurative pieces were only recovered from the Southern Enclosures, with two of the four being kiln-associated (Nos. 2 & 4; No. 11's sherd also coming from Kiln 4).

The numerical/marked sherds in the Central Enclosure all derived from its northern paddock, with none in its southern third. Aside from one in Well 4's assemblage (No. 17), in two instances such pieces occurred together within the main perimeter ditch (Nos. 7/4 & 21/22).

Numerical/'mark' vessels also occurred in six burials: Numbers 19 and 24 within Graves 52 and 17 in Cemetery I, Number 25's samian in Cemetery II's Grave 899 and Number 18 in Cemetery IV's Cremation 1086b; also, an isolated cremation within the Central Enclosure (No. 955) was 'stump-batchmarked', with an unrecorded graffiti reported on a vessel in another Cemetery IV cremation (No. 1070; as a Mucking product, it was also likely to have been of the 'batch' type). This seems a rather high incidence. Simple 'X's also see a relatively high frequency, with two occurring within the Central Enclosure (one in Well 4), and the other four in the area of the Southern Enclosures.



Figure 3.36. Site distribution of 'marked' pottery and illustrations of literate and figurative graffiti vessels.

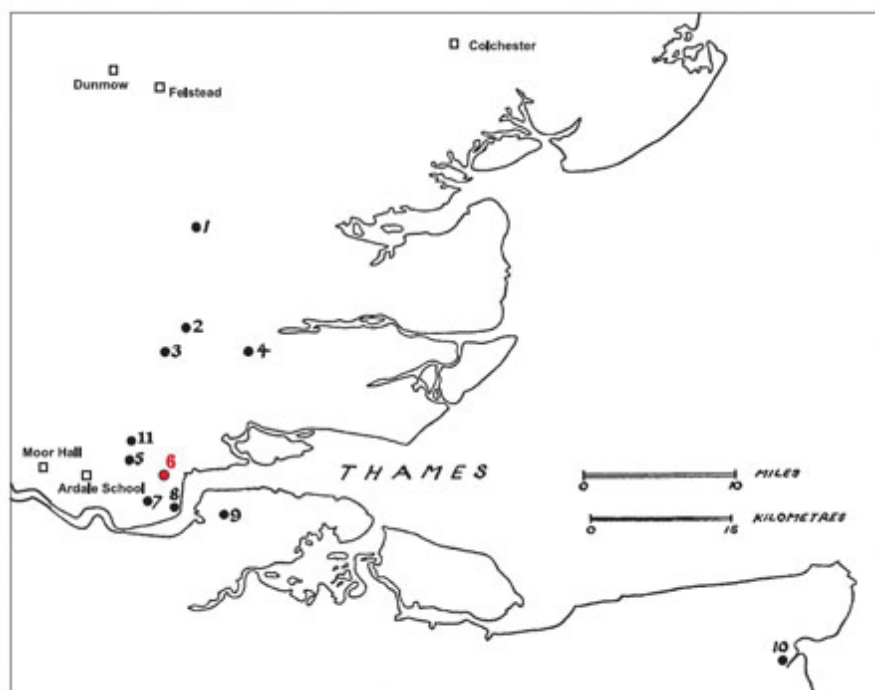


Figure 3.37. Map distribution of Mucking-type 'stump'-marked wares (Jones 1972, fig. 2 with squares indicated updated entries): 1) Chelmsford;

2) Billericay, Norsey Wood ‘Camp’; 3) Billericay School; 4) Wickford; 5) South Ockendon; 6) Mucking; 7) Gun Hill; 8) East Tilbury; 9) Cliffe; 10) Richborough.

We have updated the map that Margaret Jones produced in 1972 of the wider distribution of the ‘stumps’ motif (Fig. 3.37). Including the findings listed in Going 1987 (Colchester, Felsted and Dunmow), to this can be added their nearby occurrence at the Ardale School Site, Stifford (Wilkinson 1988, fig. 75) and, further west, at Moor Hall, Rainham in East London (Howell *et al.* 2011, fig. 58). While probable Mucking products occurred in the nearby Stanford Wharf excavations, no such marks are reported there (Biddulph *et al.* 2012, 97–8), with there also apparently being none at Orsett ‘Cock’ (that settlement having, though, its own kilns; Carter 1998). More recent finds, therefore, largely confirm the original 1972 plot: focussing on the Muckingarea environs, but with a wider dispersion in South Essex. Although cited as recovered from Richborough and Cliffe in Kent, they do not feature in the published assemblages from the recent major projects in that county.

Well Closures

Though Well 4’s artefact tallies were listed in its description in Chapter Two, in this course of that chapter’s standard reportage by category of the site’s finds, its assemblage has, in effect, become dispersed. Given how crucial it is for, at least, the interpretation of the Roman settlement’s early phase, the effort will be made here to reunite its assemblage in a contextual manner. Having done this, in Chapter Five will we try to trace which building might have been its immediate source and discuss what this implies for the Central Enclosure’s function and status; we will also try to trace what might have been its burial ‘linkages’. Attempting this might be considered naive, but the need to *re-connect* the wealth of the period’s various context-types is amongst the greatest challenges (and potentials) of Romano-British archaeology.

Sunk to a depth of 11m+ and having an assemblage of 7294 sherds, there is no denying that Well 4 was an extraordinary feature. Its original digging was a risky enterprise and an enormous expenditure of labour. So too must its second-century dumped infilling have been a major decision. It must have meant much to abandon something that took so much investment, and indicates the importance then granted to the enclosure’s clearance.

Well 4 must now certainly rank amongst the ‘great Roman pit-closing deposits’ by the composition of its artefact assemblage. Two comparators could be cited. One was a substantial 3.00m+ deep pit

excavated at 28–32 Bishopsgate London in 1982 (Evans & James 1983; Tyers 1984). Of mid second-century date, this yielded over 120kg of pottery (95.54 EVE), with many sherds of near-complete vessels, as well as an array of small finds (e.g. pipeclay figures, two lamps). Apart from Verulamium, Highgate Woods and Black-burnished Industries products, it had a significant samian assemblage (including a near-complete Drag 37 Montans decorated bowl). Most important was the extensive range of its amphora types, which in total amounted to c. 36kg. Its 548-piece animal bone assemblage saw a relatively wide range of wild species and birds (11 deer, 20 cod and 86 domestic fowl), and the pit was interpreted as reflecting the *en masse* redeposited contents of either a substantial private dwelling or some manner of ‘cookshop’ (Tyers 1984, 324).



Figure 3.38. Well 4, photographs showing upper burnt deposits.

Another single feature assemblage was forthcoming from Well F.871 at the Roman state-supply farm site at Langdale Hale, Colne Fen, Earith (Evans *et al.* 2013, 94–5 & 169–70). Excavation of this 1.65m-deep, dump-infilled feature yielded c. 50kg of pottery (c. 1600 sherds; 42.19 EVE), which was well preserved and had a low brokenness index (37.89). Dating to the second–third centuries, and with sherds from a minimum of 223 different vessels (including a complete Drag

37 samian bowl), most remarkably it included seven Nene Valley Colour-coat lamps and an estimated c. 11,000 fish bones (probably relating to *garum* production; its faunal assemblage also saw a high number of bird bones: 24.3% NISP). There – as at the Bishopsgate Site and arguably Mucking's Well 4 – it is these kinds of extraordinary 'closure' deposits that can radically alter a site's interpretation.¹⁵

Figure 3.39 represents an attempt to plot Well 4's pottery by depth; for the purposes of intelligibility its various 2–6" spits are grouped into units of a foot each. It is an 'attempt' insofar as approximately a third of the recovered assemblage lacks indication of depth (2233 sherds), but it is assumed that most of this derived from its surface cleaning. This would be consistent with the material's overall recovery pattern. While it is true that there was a marked fall-off below the level of 8–9ft (c. 2.40–2.75m), and that at the 12ft level (c. 3.65m) there was a further steep decline, (with less than 50 sherds recovered per foot below that point), fantastic quantities occurred in the feature's upper 3ft/c. 0.90m. This, of course, is biased by the much greater catchment of its uppermost profile. Nevertheless, almost 3150 sherds – more than half of the total assemblage – occurred above this level, including c. 85% of its samian (940 sherds; see Fig. 3.40).

With high incidences of samian and mortaria, and low numbers of jars, the unusual nature of its pottery assemblage needs emphasising. In order to consider it in greater detail, it was broken down into four subsets: the 'burnt' assemblage portion in the upper fills, pottery associated with the second and first recuts of the well, and that associated with the original well shaft (Table 3.22). As can be seen, the vast majority of the pottery (95.11%) was associated with that upper 'burnt' deposit (although many of the sherds were identified during post-excavation as burnt, many others within the same deposit did not show such distinctive signs of having been so scorched).

Various imports were represented in the pottery assemblage deposited into the feature's upper levels. Along with the extensive samian assemblage were remains of at least one Koln beaker (with cross-joining sherds spread over several spits); a Lyon beaker; a *Terra Nigra* platter and a Gallo-Belgic platter. The latter two vessels would have been old when deposited, as would the three rim sherds of a Cam 76 in TR1(A), probably an import from *Gallia Belgica*; these were from adjacent spits, and probably derive from the same vessel. One of the sherds was abraded, perhaps suggesting that the vessel had been broken for a time before deposition (it is, of course, at least one hundred years older than the depositional event). Within the more locally derived assemblage, older vessels were also present: some of the beaker and jar fragments were in grog-tempered wares (BLB fabric) and 'Belgic' forms, while later first- to early second-century

shell-tempered jars were common. Other older vessels were also present within the samian assemblage. While the bulk of the samian from the burnt deposit was Central Gaulish Lezoux, firmly dated to the second century AD (some of which would still seem to have been a few decades old), there were also some first-century pieces: five sherds of Flavian samian, from a cup (probably Drag 27) and at least two dishes (Drag 18 & Drag 36). The presence of older vessels should not occasion any surprise: various burials have now been documented as containing samian vessels up to 150 years old when deposited (Wallace 2006), and the presence of similarly aged vessels within household assemblages should be expected.

Aside from the scale of the well's samian assemblage, what is unusual about the pottery are the concentrations of particular forms in certain fabrics. Within its 'burnt' portion, 90% of the beakers and 92% of the bowls were in 'London' Ware (with Well 4 having 47% of all the site's such wares) and 92% of the dishes were in Mucking BBT2 fabric (Fig. 3.41). Very few of these eating and drinking vessels were in locally-produced fabrics; there is little evidence for London Ware having been produced in the Mucking kilns, although the BBT2 vessels probably had been. The food production vessels, in contrast, were virtually all in either shell-tempered fabrics or grey wares, and their forms strongly suggest that they were local products. Flagons, in common with the assemblage from elsewhere on the site, were largely in non-local products.

Dickinson and Bird suggest above that the well's contents, with its low proportion of decorated samian wares, might represent the stock of a burnt-down shop or store, but examination of the other pottery makes this seem unlikely. A shop located within the main enclosure of a site with its own pottery kilns would surely have been selling local products, possibly alongside some more exotic vessels. This does not appear to be the case with the Well 4 assemblage, with its apparently deliberate choice of beaker and bowls in London Ware, flagons, and samian from Central Gaul. Only the jars (of which there were relatively low numbers), and potentially the dishes in BBT2 fabric, seemed to have been largely produced at Mucking. What is also of interest are the divergent ages of the pottery represented. The incised and rouletted London Wares are generally regarded as later first- to early second-century in date (Tyers 1996, 170). The samian displays a range of dates within the second century. This appears to have been an assemblage built up over a considerable period of time, with forms added and vessels replaced as necessary. An original collection of flagons, plus London Ware beakers and bowls, with a few samian cups, dishes and bowls, was apparently joined by a service of black-burnished dishes in the mid second century, with much larger

numbers of samian cups, bowls, dished and platters (perhaps as a response to changes in eating habits). *This is best interpreted as a higher status household assemblage*, although a religious building cannot be completely discounted. While the estimated date for the bulk of the samian assemblage was AD 160/70, given the proportion of older material present within this assemblage, and the presence of grey ware forms with date ranges that extend into the early third century, it is entirely possible that it actually saw deposition later on in the second century than the samian might suggest (as this assumes that the samian was relatively new when buried, whereas it could, like the London Ware accompanying it, be several decades older).

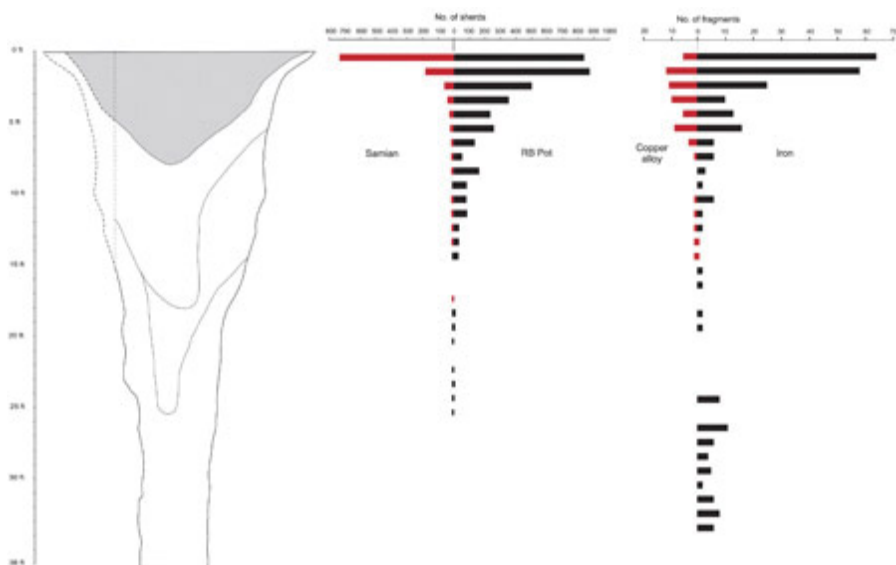


Figure 3.39. Well 4, with pottery and metalwork frequency plotted by depth.

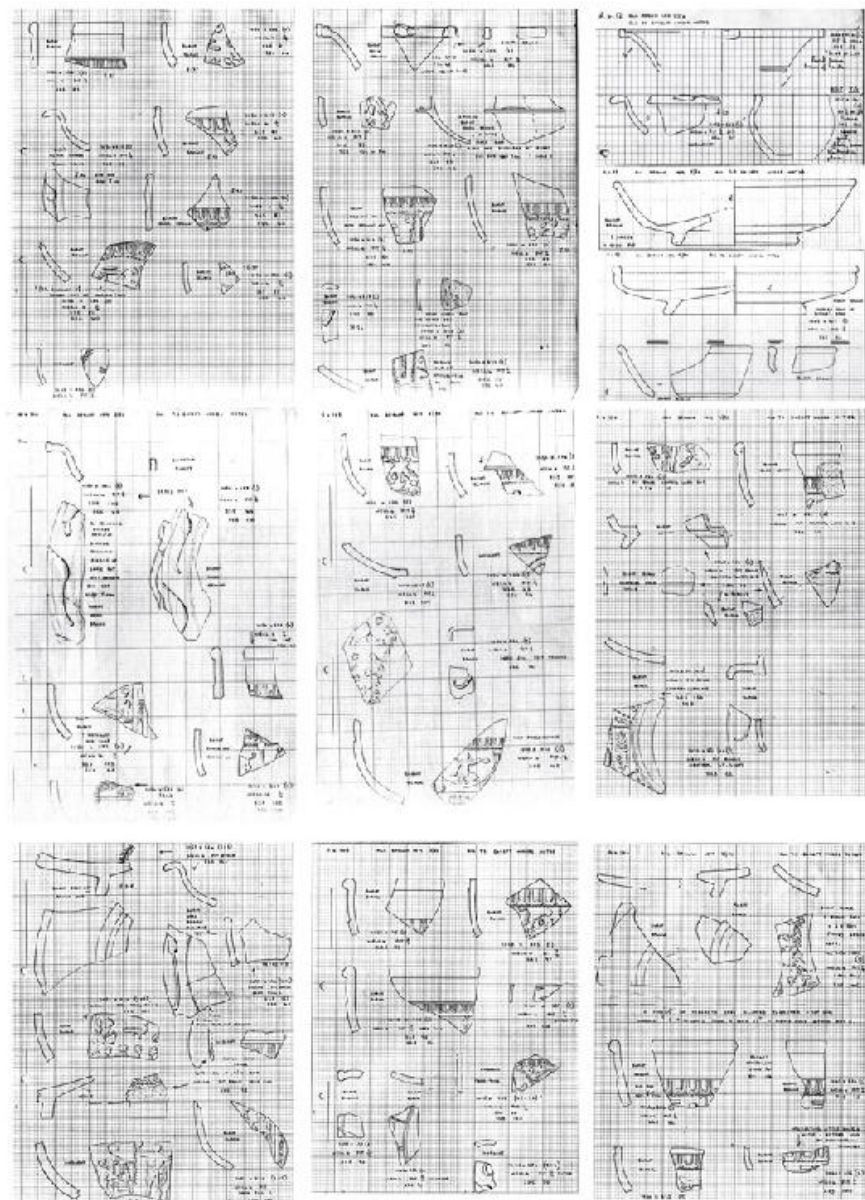


Figure 3.40. Well 4, excavation recording of samian.

Table 3.22. Well 4 assemblage, by phase and vessel type (as EVEs).

EVEs	Burnt	Second recut	First Recut	Original well
Dining				
Bowls	6.9 (6.36=LN)	0.91 (all LN)	0.11	0
Dishes	14.53 (13.39=BBT2)	0.05	0	0
Platters	0.18 (0.08=TNA)	0	0	0
TS bowls	1.94 (1.66=Lezoux)	0.06 (All S Gaul)	0	0
TS dishes	12.13 (11.76=Lezoux)	0	0	0
TS platters	2.59 (All=Lezoux)	0	0	0
Drinking				
Beakers	20.05 (17.99=LN, 1.1=CLC)	0.2 (all LN except 1 EGS)	0	0
Cups	0	0	0	0
TS Cups	14.63 (14.49=Lezoux)	0.07 (All S Gaul)	0	0.23 (All S Gaul)
Food Prep				
Jars	17.23 (9.41=BL, 7.05=GRY/S)	2.61 (2.28=BL)	0.28 (all BL)	0
Storage jars	2.52 (2.22=GVC)	0	0	0
Lids	0.76	0.23 (0.2=BL)	0	0.1
Bucket	0	0	0	0
TS Mortaria	0	0	0	0
Serving				
Flagons	1.21	0	0	0
Flasks	3.53 (2.53=GFN)	0.2	0	0

Can the vessel numbers within this assemblage be estimated? Even using EVEs, it appears to be a considerable body of material. Using stamp-links, Bird and Dickinson argue that although a maximum number of 765 samian vessels are represented, a total of around a twentieth of this would be more accurate. This would work out at around 38 samian vessels in total, and this compares with 31.29 samian EVEs recorded: a slight, but not vast underestimation (and more support for the argument that whole vessels are represented). Accepting the number of EVEs multiplied by a factor of 1.2 as a rough approximation of vessel numbers in both samian and other fabrics, this assemblage would therefore equate to 11 bowls, 32 dishes, four platters, 42 beakers or cups, six flagons or flasks, three storage jars and 21 jars. Only the latter showed any indication of organic deposits indicating use in cooking, and the other vessels are all assumed to have been for serving, eating and drinking. On the assumption of one beaker/cup and one dish/bowl per person (Cool 2006, 53), this would be an assemblage sufficient to provide food and drink as individual servings to at least 42 people – a considerable number if it was all in use at one meal.

As has already been detailed, the well's burnt deposit produced a vast quantity of building material. Although no worked stone was apparently associated, sandstone 'lumps' were reported, and there can be little doubt that its contents included the remains of a burnt

building. When compared to its 1.4 metric tonnes of daub, tile was only present in low numbers (42 pieces; 6.24kg); much of it, however, may have been salvaged for re-use elsewhere. Nails were certainly used in the destroyed building's construction, with a total of 224, plus two iron cramps, recovered from the burnt deposit. (As shown on [Figure 3.39](#)'s other vertical plot, in the main Well 4's copper alloy finds and ironwork also display a marked upper-profile 'bulge' not unlike the pottery. The higher frequency of iron within the lower part is from nails used in the well's timber frame.)

Other elements of material culture within the Well 4 burnt assemblage comprised metalwork and glass. Several glass vessels were represented (see above), including at least one blue-green prismatic bottle (two similar fragments were recovered from the fill of PG71, one of which was partly melted), at least one blue-green cylindrical bottle plus other uncertain and melted bottle fragments, a possible colourless cup, a flask and fragments of a dark blue vessel. The metalwork also included serving vessels, possibly decorated (the many fragments of corroded and/or burnt copper alloy sheet must represent further examples), a possible casket or bound box, some personal possessions, in the form of bracelet, bangle, pendant and hairpin fragments, as well as possible tweezer fragments. The jewellery fragments clearly indicate that this household was a mixed one, as bangles and bracelets have clear female associations in the mid Roman period. Agricultural and other tools were also present (a spadeshoe and a ploughshare, and a punch and a chisel, together with a domestic knife), as well as a lock and key, hinges and bindings. The animal bone evidence from the burnt deposit suggested a mixture of butchery waste, prime meat joints (of both cattle and sheep) and cattle horn cores, presumably in preparation for some craft manufacture. *These finds all support the suggestion of a high status domestic residence that perhaps fulfilled official reception and administrative duties for the settlement, and argue against a ritual role for the structure represented.*

Table 3.23. Wells, assemblage comparison.

	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Wells 7a/7b	Well 8
Pottery	689	960	60	6058	165	1145	167	145
Terra Nigra	-	-	-	1	-	-	-	-
Terra Rubra	-	-	-	5	-	-	-	-
Samian	-	4	6	1105	-	9	-	1
Amphorae	-	-	-	125	1	-	-	-
Figurine	-	Venus + frag	-	-	-	-	-	-
Coins	-	-	-	3 (+1)	-	1	-	-
Copper alloy								
Pins	-	-	-	4	-	1	-	1
Jewellery	-	-	-	6	1	-	-	-
Tweezers	-	-	-	1	-	-	-	-
Horse Gear	-	-	-	2	-	-	-	-
Tools	-	-	-	2	-	-	-	-
Vessels	-	-	-	1+5?	-	-	-	-
Casket/box?	-	-	-	1	-	-	-	-
Stud/decorative	-	-	-	3	-	-	-	-
Misc/strap/unident.	-	-	-	36	-	-	-	-
Iron								
Brooch/brooch spring	/1	-	-	-	-	-	-	-
Structural	-	-	1	c. 250	?1	-	3	1
Locks, Latch-Lifter and keys	-	-	-	3	-	-	-	-
Linch-pin	-	-	-	1	-	-	-	-
Pins	-	-	-	-	-	-	1	-
Snaffle-bit	-	-	-	1	-	-	-	-
Knife/blade frag	-	-	-	1	-	1	-	-
Tools	-	-	-	2	-	-	-	-
Agriculture	-	-	-	2	-	-	-	-
Ferrule	-	-	-	1	-	-	-	-
Sockets	-	-	-	1	-	-	-	-
Misc	-	-	-	7	-	-	-	-
Weapons	-	-	-	-	-	-	1	-
Hobnails	-	-	-	2	-	7+	-	-
Lead	-	-	-	6	-	-	1	-
Mortaria	-	4	-	18	-	11	1	1
Glass	3	-	-	21	-	-	3	-
Daub	-	?1/250g	-	?/1400kg	1/210g	-	-	-
CBM	37	13	-	133	-	70	19	10
Quern	7	-	1	-	-	4	-	-
Animal Bone	22	1	-	88	4	141	67	4

As well as challenging our conceptions of the relative status of the settlement at Mucking, the composition of the Well 4 assemblage has implications for the interpretation of sites through material culture generally. While the well produced 4.32% of the pottery from the site as a whole, it yielded 41.1% of the samian and at least 11.1% of the amphorae,¹⁶ as well as the high proportions of other imports and non-local products noted above. If the building represented in the well deposit had not burnt down, it can be assumed that very little of this material would have made it into the features associated with the site, and our interpretation would probably be rather different, seeing it as a site with relatively low status. Although the settlement does not appear to have engaged heavily in monetary activity, certain of its

inhabitants clearly had access to high status products in the form of pottery, glass and metal vessels.

Well 1 also saw an interesting depositional sequence (see [Table 3.23](#)), and one that has caused some misinterpretation of the kiln chronology at Mucking (see Jefferies & Lucy, this chap.). Lying at the well's base were a number of largely complete vessels, along with other sherds; some lay partly under the collapsed well-framing. This pottery comprised two sherds of Antonine and late second- to mid third-century samian, a sherd from a grey ware flask (KA01), sherds from two slipped grey ware dishes (RB03 & RC07), with others of incipient flanged and developed flanged bowls (RC09 & RC10) and two slipped grey ware jars (AC08 & HA01), the base of a grey ware beaker with a cross scratched on it, plus two complete or near-complete slipped grey ware jars (GC06 & GC04). Sherds of amphorae are also indicated on the plan, and these correspond with Gallic and Dressel 20 sherds reported by Williams (see above). With the exception of the samian and the amphorae, these could all have been produced in Kilns 2 or 4, and a dating of AD 120–250 would be consistent with the forms seen. Such a deposit would, therefore, be consistent with the well going out of use in the early to mid third century; in other words, towards the end of Phase 2. Glass vessel fragments also found at the bottom of Well 1 would also support this (see above), comprising the neck and handle of a dolphin-handled cylindrical bottle (AD 250+) and an Early Roman blue-green jar fragment (although the identification of a third sherd as possibly Anglo-Saxon in date is rather puzzling).

What significance can be assigned to the deposit at the bottom of Well 1? The presence of a range of whole vessels suggests perhaps some kind of symbolic 'closing' deposit, perhaps marking the end of its use. Alternatively, these whole vessels could represent a commissioning deposit underlying such a closing deposit (M. Fulford pers. comm.). A limited collection of animal bone (mainly cattle) at the bottom of the feature, together with two fragments of rotary quernstone, could also perhaps tell of its deliberate closure. It may be no coincidence that the disuse of this well appears to coincide with the general decline of the Romano-British settlement at Mucking; as argued below, there are no cut features that can unambiguously be assigned to the subsequent phase, and very little later Roman material is present in contexts that are of definite later Roman date (as opposed to being associated with the earliest Anglo-Saxon occupation; see below).

Deposits within the Central Enclosure's Well 6 are also 'suggestive' ([Fig. 2.11](#)). A surprising number of fragments of dog and horse bones were recovered from the lower fills, together with cattle bones.

Associated pottery suggests that infilling of the original well shaft began in the second century AD, mainly with broken locally-made jars, but with occasional serving and drinking vessels, such as a late Antonine samian platter and an Antonine dish, and a few sherds of Brockley Hill flagons, London Ware and colour coat beakers. With no signs of burning, these may represent further rubbish disposal from contemporary occupation in the second century AD; hobnailed shoes and building nails also seemed to be represented in these lower well fills. The main pottery dump, in the top 2.0m of its shaft, also included fragments of London Ware beakers and flagons, together with central and eastern Gaulish samian, but these were deposited alongside later fabrics such as Oxfordshire colour coats, parchment wares and products of the Much Hadham kilns; this may, therefore, represent a later phase of site clearance and deposition (several of the upper levels also produced fragments of Anglo-Saxon pottery, and this may even be much later activity).

None of the other wells displayed such noteworthy features, and seem to have been subject to more gradual silting and infilling (although the deposition of the two pipeclay figurine fragments in the upper layer of Well 1 may be significant, as may two fragments of window glass in the upper layers of Well 7; the bangle in Well 5 may represent a casual loss).

The Anglo-Saxon Impact and Late Roman Occupation

At just some 30 pieces, Mucking's Roman-phase lead assemblage seems remarkably unimpressive, both in its quantity and limited range (see Mould, above). It lacks, for example, lead weights, which by the character of the settlement would be reasonable to expect. With such vast assemblages at hand it might seem odd to be concerned with what is 'missing'. Based, nevertheless, on expectation, this certainly seems to be the case, and if its lead is missing for some reason, what of the period's other assemblages? This absence of lead does not seem to reflect any kind of failure of artefact-type cataloguing or retention, but rather the impact of the site's subsequent Anglo-Saxon usage.

Coming almost exclusively from the southern end of the site (Hamerow 1993, fig. 9), more than 90 lead items were recovered from *Grubenhäuser*. The evidence indicates that this metal was then being worked, with a definite lead ingot and another such candidate found in two (GHs 41 & 82), and substantial lumps of molten lead recovered in another two of its buildings: GHs 49 and 17 (*ibid.*, 15). Within the latter were five cast lead rings/perforated discs, with the same number occurring in GH66 and six in GH77. Altogether 28 of these were recovered (Fig. 3.42), with some seemingly made using the same mould. Up to 8cm in diameter, these are generally large objects. While

the possibility of their functioning as loomweights was fully explored, they were instead thought to be ingots manufactured from recycled Roman lead, given the scarcity of lead then (*ibid.*, 70–1). This certainly seems a plausible interpretation and one that would explain the paucity of the site's Roman lead. Without having weights for this material we lack any basis of exact calculation; however, it is probably safe to assume that this Anglo-Saxon recycling would account for many hundreds of 'missing' Roman lead items. Hamerow, in fact, posited the value of this lead 'plundering' to be such that – upon the exhaustion of the immediate area's supply – it might explain the northward shift of the later Anglo-Saxon-phase settlement beyond what had been the confines of the Roman system (*ibid.*).

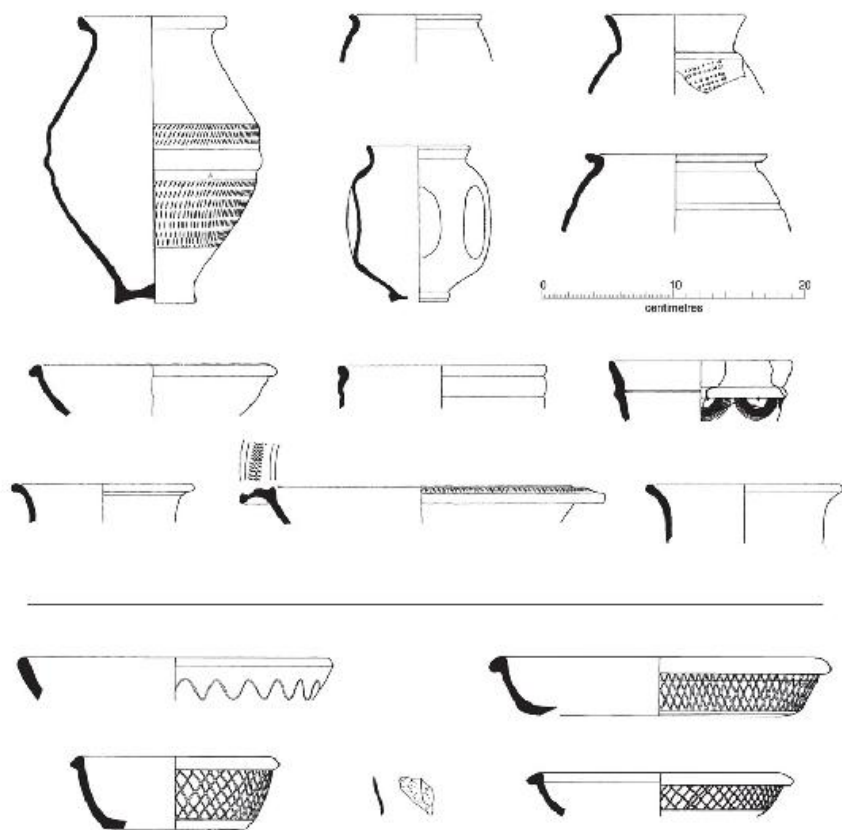


Figure 3.41. Well 4: examples of imported pottery and London ware bowls and beakers (top); below, BBT2 dishes.

Another potentially significant distribution to consider is antler. Amounting to 49 fragments, in the Anglo-Saxon Volume Done cites

deer bones from 29 of the site's *Grubenhäuser* (in Hamerow 1993, 79). Aside from being found in five *Grubenhäuser*, she noted the recovery of at least 10 antler pieces from a ditch (3958; 150N/530E). This is the so-called 'Antler Ditch' (Roman-assigned cut No. 3963) that was thought to have been later recut at that date (0.45m deep), due primarily to substantial quantities of Anglo-Saxon pottery within its upper profile. It was from a 9ft/c. 2.75m-length of it that the antler was retrieved; lying along the site's southeastern margin, its excavation conditions were apparently not ideal and part of it was destroyed without excavation (Hamerow 1993, 19–20).

Figure 3.42 shows the distribution of the site's Roman-attributed antler. It omits the occurrence of three pieces dotted around the North Enclosure's main perimeter, but it clearly shows that the majority of the 79 pieces occurred in the south of the site, with the line of the Antler Ditch marked by its find-spots. (Not included here, the plot of the Roman deer bone shows a similar dominance in the site's southern quarter, with the same ditch length picked out; there are otherwise only five occurrences of deer bone across the central and northern portions of the site.) There is no easy way to make sense of this: was all the southern area's deer bone and antler Anglo-Saxon, and has that ditch's original Roman designation been misattributed? The ditch kinked at an angle to the main Roman system and, therefore, it is conceivable that, at least over part of its length, its initial cutting was later than has been thought. Yet, as further outlined below, Late Roman and Anglo-Saxon pottery occurred in the upper profiles of a number of the major earlier features; moreover, ditches as such do not appear to have been a component of the Early Anglo-Saxon settlement's layout. The actual attribution of the very high antler/deer bone densities at this point – whether they are all Roman, Anglo-Saxon or 'mixed' – is highly ambiguous. As we will see, this is crucially important for understanding the character (and chronology) of the site's Anglo-Saxon occupation.

Table 3.24. Romano-British material occurring in Grubenhäuser, omitting those with less than five sherds and no other significant finds (GHs 4, 6, 13, 19, 23, 25, 32, 41, 42, 46, 48, 52–4, 56, 60, 64–6, 68, 69, 71, 72, 74, 75, 80–2, 101, 103–5, 107, 108, 110, 111, 115–17, 119, 121, 127, 129, 130, 131, 133, 135, 148, 149, 153, 168, 182, 184, 189, 190, 206 & 212).

GH	R-B Coins	RB Metalwork (Hamerow)	Other	RB Bases	Samian	R-B Pottery	Total Roman Pot
1						73	73
2		Casting, brooch pin		5		92	92
3				5		50	50
5		Loop hinge		1		7	7
7						8	8
8		Pin	Vessel glass			1	1
9	1					4	4
10		Bracelet			5		5
11			Vessel glass		1	1	2
12/21	1	Brooch	Vessel glass, Window glass	31		209	209
15			Vessel glass		1		1
17			Vessel glass				
22		Suspension loop					
26		Brooch					
28				2	1	6	7
29					5	4	9
30				1	1	27	28
31	1					1	1
33					1	4	5
34			Vessel glass	1		3	3
35					4	3	7
36		Ligula	Vessel glass		2	4	6
37					1	4	5
38				2	6	8	14
39					4	2	6
40			Vessel glass	4	4	14	18
43		Tweezers			2	10	12
47	1				3	10	13
49					4	3	7
50				4	3	17	20
51	2	Bracelet			1		1
55		Steelyard		1		22	22

57	22	Disc belt fitting, brooch	5 x beads, 2 x fragmentary shale bracelets	4	2	23	25
58					5	15	20
59			Vessel glass	1	1	6	7
61					4	2	6
62	2				5	1	6
63		Brooch	Vessel glass		3	4	7
67		Brooch spring			3	5	8
73	2				1	1	2
77					3	3	6
78						9	9
79					1	9	10
84		Vessel rims x2					
90	1						
113	1	Belt plate frag		1	1	2	3
118	1						
152	1						
169		Key				1	1
175/185		Brooch			1	1	2
195	2						

The character of the Roman material occurring within the site's Anglo-Saxon contexts was overviewed in the Anglo-Saxon settlement volume (Hamerow 1993, 71–3). It does, nevertheless, warrant some further review here. Based on the information in that volume's gazetteer and listed in [Table 3.24](#), in total 18 copper alloy objects, from 15 *Grubenhäuser*, were of probable Roman attribution. Amongst the most noteworthy were a ligula from GH36, two vessel rims (GH84), a disc belt-fitting and a brooch in GH57 (along with five beads and two shale bracelets), with perhaps the most significant being a steelyard from GH55. As also indicated in [Table 3.24](#), Roman vessel glass was forthcoming from 10 of these buildings, with one – GH12 – also having pieces of window glass.

Roman coins occurred in *Grubenhäuser* at both the site's southern and northern end, being present within four in the latter, including one with two coins (GH195). Interestingly, none featured within the fills of those in the areas of the Western and Central Enclosures. Coins were present in nine of the southern quarter buildings. In four instances this involved two coins each (GHs 62, 51, 73 & 195) and, in GH57, 22 (see Going 1993b). In total, therefore, amounting to 44 coins, if we add to this the six occurring in two of W1 (depth 180),

Enigma, K14 Later Nene Valley the Anglo-Saxon graves (Nos. 123 & 789), then 50 of the site's 133 Roman coins came from Anglo-Saxon contexts.

Table 3.25. *Distribution of main classes of later Roman pottery.*

Feature	GH	SEI Upper	SEI Lower	SEI Upper	Other AS features	SEI Pit	Other	Total	Details of 'other' context
A. Dipper	5	9	4	0	1	2	0	21	
Lates be-b-wisewood	0	1	1	0	0	0	0	2	
Mayan Waze	0	0	0	0	0	0	7	7	W1 (depth 100), Fulgus, K.34
Later Nene Valley	0	7	9	39	1	1	30	53	W1 (depth 100), Fulgus, K.34
Post-ditch D	0	0	16	11	2	0	0	29	W1 (depth 100), Fulgus, K.34
Refusals	0	0	14	0	1	1	2	18	W1 (depth 100), Fulgus, K.34
Later On footable	13	9	0	9	2	0	26	75	W1 (depth 100), Fulgus, K.34
Total sherds	15	25	35	50	7	3	130	265	
As % of later assemblage	5.4	9.4	14.2	19.2	2.7	1.1	49.0	100.0	

Including 135 pieces of samian, altogether 856 sherds of Roman-period pottery were recovered from 108 of the site's *Grubenhäuser*. A maximum of 209 sherds occurred in GH12/21 and 92 in GH2; seven others contained 20 or more sherds (GHs 1, 3, 30, 50, 55, 57 & 58). Roman pottery in Anglo-Saxon contexts occurred site-wide and was present in *Grubenhäuser* throughout. There are, though, marked differences in its densities. As is apparent in [Figures 3.43](#) and [3.44](#), all of the *Grubenhäuser* with 10 or more Roman sherds fell within the site's southern quarter (and south of Anglo-Saxon Cemetery II). This marked fall-off seems particularly distinct in the case of those 10 *Grubenhäuser* in the area of the Western Enclosures, which after all was intensely utilised in the Early Roman period; of these, only four yielded any Roman sherds and none had more than four.

There can be no doubt of the impact which the site's Anglo-Saxon occupation seemingly had upon the 'assemblage representation' of the earlier settlement, especially its metalwork and coins. This is particularly true of the site's southern quarter/Southern Enclosures-area and, at least at first glance, seems inexplicable.

In her discussion of the character of the Roman material occurring in the site's Anglo-Saxon contexts, Hamerow (1993, 71) cited Barbara Kinnes' 1968 MPhil thesis concerned with the first 30 of the site's *Grubenhäuser* to be excavated. Kinnes emphasised the regular recovery of Roman pottery in those buildings (in contrast to the sparsity of their prehistoric material); her analyses indicated, though, a much higher proportion of Roman to Anglo-Saxon sherds in their upper levels than in the lower (c. one to one vs. one to three). Based on this, Hamerow argued that only in the instance of GH57 was the nature of the Roman material such that it would point to its deliberate collection (*ibid.*). Given the quantities involved, there is no escaping the implications of the paucity of accompanying prehistoric material –

especially worked flint, which by its site-wide distribution (see Prehistory Vol., fig. 2.3) must have been a feature of all of the site's generic ground-surface deposits. We hold that the occurrence of Roman material in the Anglo-Saxon buildings must reflect a greater degree of 'intentionality' than Hamerow admitted.

What has received almost no attention in the site's discussions is the actual date of this Roman material in Anglo-Saxon contexts. It could be argued that it is beyond our remit to re-interpret the site's Anglo-Saxon settlement. Yet, if the site's Late Roman occupation has somehow become subsumed within it, it certainly is. Obviously informed by the knowledge of the Late Roman military equipment in some of Mucking's Anglo-Saxon graves and, with it, the site's original *foedorati* arguments (Jones *et al.* 1968, 226–7; Evison 1981, 141–2), further consideration of this question can now be informed by the results of more recent Gateway-area excavations. The distinction of Mucking's southern settlement cluster-area (Hamerow 1993, fig. 50) was proposed by Hamerow (*ibid.* 86–9), who held it to be the earliest (dating to the fifth century) and distinct from the rest of the site's Anglo-Saxon settlement by the absence of accompanying post-built 'halls'. This was later disputed by Tipper (2004), who claimed that any associated post structures might have there been lost through quarry disturbance. Long scrutiny of its area-plans, though, would instead support its different nature: the 'halls' did not occur there and generally its *Grubenhäuser* were somewhat smaller and of less regular sub-rectangular plan than in the north of the site. Here, what is particularly significant from recent excavations in Kent is the recovery of later Roman sunken-feature buildings without accompanying post-buildings (e.g. Bennett *et al.* 2008, 107–50).

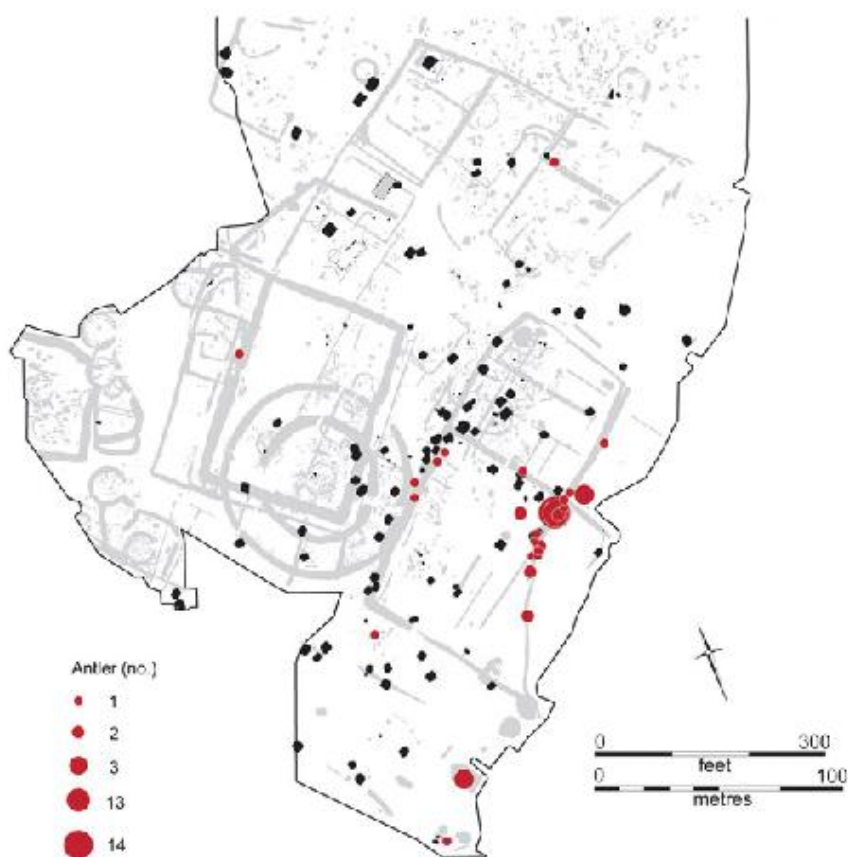


Figure 3.42. Distribution of antler finds (both Roman- and Anglo-Saxon-attributed) and, above, archive photograph of various cast lead ring-forms.

Table 3.26. Later Romano-British wares at Mucking by vessel part.

Ware	Total sherds	% Rims	% Body sherds	% Base
Nene Valley CC	394	22	63	14
Much Hadham	590	12	81	7
Parchment	57	25	70	5
Late Roman Shell	24	29	71	0
A l'éponge	28	25	75	0
Portchester D	195	16	75	9
Alice Holt	3	33	66	0
Mayen	3	0	100	0
Rettendon-type	18	0	94	6
Oxfordshire CC	501	29	59	12

Table 3.27. Distributions of dated pottery through the fills of ditch D15.

D15	Samian	Mortaria	Phase 1	Phase 2	Phase 3	TOTAL
Level 0	2	6	9	20	30	67
Level 1	7	0	137	931	71	1146
Level 2	2	0	74	98	0	174
Level 3	0	0	7	20	0	27
Level 4	1	0	10	0	0	11
TOTAL	12	6	237	1069	101	1425

Table 3.28. Distributions of dated pottery through the fills of 'F' ditches.

F Ditches	Brooches/Coins	Phase 1	Phase 2	Phase 3	TOTAL	Anglo-Saxon
Level 0		24	652	4	680	
Level 1		1055	7239	78	8372	x
Level 2		500	3748	84	4332	
Level 3	AD 259-68	214	1299	5	1518	
Level 4		104	403	0	507	
Level 5+		66	142	0	208	

Table 3.29. Distributions of dated pottery through the fills of RBI.

RBI	Brooches/Coins	MIA	MIA-LIA	Phase 1	Phase 2	Phase 3	TOTAL	Anglo-Saxon
Level 0	AD 98–117; 268–70			28	94	2	124	
Level 1	AD 367–74; LIA			1115	5119	155	6389	xx
Level 2	AD 161–80	x	x	1687	1992	65	3744	xx
Level 3		xx	xxx	1157	424	2	1583	xx
Level 4	1st BC	xxx	x	575	309	8	892	
Level 5		x		124	25	2	151	
Level 6		x	xx	22	132 (late fill)	0	154	
Level 7		xx		40	5	0	45	
Level 8		xxx						
Level 9		xx						
Level 10		xx						
Level 11		x						
Level 12		xx						
Level 13		x						

By contrast with the activity seen in the first to mid third centuries AD, the latest Romano-British phase at Mucking was evidently much less intense (Fig. 3.43). Pottery production in the large kilns does not appear (on the basis of forms produced) to extend much past AD 250.¹⁷ When compared to the substantial earlier Roman assemblages, there is relatively little later Romano-British pottery at Mucking. However, there does appear to be a significant, although small, assemblage of non-Mucking later third- to later fourth-century wares (Table 3.12). Going (1987) has argued that assemblages composed of these wares are characteristic of the latest fourth-century activity when found in Essex, even when they are found in earlier contexts elsewhere. As mentioned in Chapter Two and as indicated on Figure 3.35, while the more generic later wares – such as Much Hadham, Nene Valley and red Oxfordshire colour coats – are relatively widely spread throughout the area of the Southern Enclosures, the more specifically ‘Late’/fourth century products have a tighter distribution (Figs. 3.44–5).

These late sherds display an interesting distribution within features (see Table 3.25). As well as being recovered in substantial numbers from *Grubenhäuser* (24% of the total of fourth-century sherds, the majority being in Portchester Fabric D), they also clustered in the upper fills of the major southern ditched enclosures: RBI, RBII and the ‘F’ and ‘D’ ditches of the enclosures just to the north. There also appears to be a substantial deposit within Kiln 14, and in the tops of some of the wells. The question to be addressed is whether this depositional activity relates to fourth-century occupation (of whatever limited nature), whether it represents deposition of material originating elsewhere at this time, or if it was being deposited somewhat later.

At other Romano-British rural settlement sites in East Anglia, fourth-century activity is often characterised by the build-up of surface deposits in a form of middening; where surfaces are stripped,

these are often ‘caught’ in the tops of negative features such as large ditches and hollows. This is true, for example, of the sites at Langdale Hale and Camp Ground within Earith parish in Cambridgeshire (Evans *et al.* 2013), at Kilverstone, Norfolk (Garrow *et al.* 2006) and at Vicar’s Farm, Cambridge (Evans & Lucas forthcoming). However, at these sites this middening is invariably associated with other firm signs of occupation, such as the laying out of new enclosure systems (often curvilinear in form), the building of structures and craft and agricultural production. This is reflected in the material culture of these sites, for example in the date-profile of coinage, or of pottery.

The coinage at Mucking supports the impression of a marked drop-off in activity through the fourth century, in comparison with other sites (Fig. 3.1). As noted previously by Going (1993, 72), 44 of the 133 Roman coins from the excavations at Mucking were recovered from Anglo-Saxon *Grubenhäuser* or other Anglo-Saxon features, including 22 from a single structure, GH57 (Fig. 3.46 top). Comparison of the adjusted coin profiles for coins from Roman features against those from Anglo-Saxon features reveals an extremely divergent pattern. Of the Roman-feature coins (Fig. 3.46 bottom), the profile shows a coinage profile of significantly high coin numbers (at more than twice the British mean) from Coin Periods 5 to 16 (AD 117 to AD 330), declining thereafter. The bulk of the later coinage from the site was recovered from non-Roman features: of 53 coins firmly dated to after AD 238, only 14 (26%) were recovered from Roman-period features, while the remainder were found in Anglo-Saxon contexts. Of those 14, all but six were found in contexts (mainly upper fills of ditches) that also contained Anglo-Saxon pottery. The six exceptions were found within one area of the site, either in the upper fills of the second-century enclosure ditch (D15) that lay to the north of RBI, or in features within that enclosure. Various gullies and post-hole alignments suggest a structure within this enclosure (Structure 14), possibly dating to the fourth century (as along with slipped and unslipped grey wares, a number of ‘late’ sherds were found, as well as coins of AD 270–73 and AD 364–78), but there are also four Anglo-Saxon *Grubenhäuser* and a post-built structure (PHB34, in the same location and on the same alignment as the potential fourth-century structure), along with postholes, pits and a gully associated with Anglo-Saxon material. It is possible that all the coins deposited in this area were part of a post-Roman phase of activity.

The main potentially later Roman enclosure ditch discussed above (D15) is worth examining in more detail for the depositional patterns it reveals. A total of 1422 sherds of fine and coarseware pottery were catalogued from the ditch fill (Table 3.26), as well as two sherds of amphorae (depths unrecorded), six sherds of mortaria and 12 sherds

of samian. Examining the fabrics by phase, it became clear that the later material resided solely in the upper fills of the ditch: this was clearly a second-century ditch that gradually became infilled in the later second or third century, with elements of later depositional activity in the resulting hollow. One such activity might have been deposition of a small collection of coins within the ditch at 550N/325E: as well as three fourth-century coins, a further three undated coins were recovered from the same location, also in the upper ditch levels. Pottery of the later third and fourth century was only found in the uppermost levels (as was Anglo-Saxon pottery). This pattern of ditch infilling is also seen in the other main enclosure systems (Tables 3.27–9); those spits with later third- or fourth-century pottery generally see the deposition of Anglo-Saxon pottery alongside.

Is it possible that these specifically later Roman pottery fabrics (especially *céramique à l'éponge*, Mayen, Parchment Wares, Portchester D wares, red Oxfordshire colour coats, Much Hadham and Late Roman Shell-Tempered Wares) may have formed a part of the 'Anglo-Saxon' domestic assemblages that were being deposited on the site? There could be two possible explanations for this: contemporary usage or curation. On other Anglo-Saxon settlement sites, the occurrence of Late Roman pottery in Early Anglo-Saxon features has occasionally been noted. At both Heybridge, Essex and West Stow, Suffolk, analysis revealed that this Roman pottery was of an unusual composition, with higher than expected proportions of colour-coated and other 'significant' sherds, i.e. finewares (Going 1993c, 71–2; Drury & Wickenden 1982). At Heybridge, the Roman pottery found in *Grubenhäuser* saw minimal representation of Late Roman coarse wares, but high numbers of Oxfordshire and Nene Valley colour coats; this contrasted with a group from a Late Roman ditch (122), which contained LRSH, Rettendon-type ware, Much Hadham wares and red Oxfordshire colour coats (the latter in smaller numbers; Drury & Wickenden 1982, 22). Other groups of latest Roman pottery, from Great Casterton, Gloucester, Bishopstone and Alcester, some of which may have been contemporary with earliest Anglo-Saxon activity, also see a predominance of colour-coated sherds (Gillam 1951, 26–7; Halsall & Rhodes 1974, 86; Green 1977, 175; Evans 1996, 79), with that predominance increasing over time.

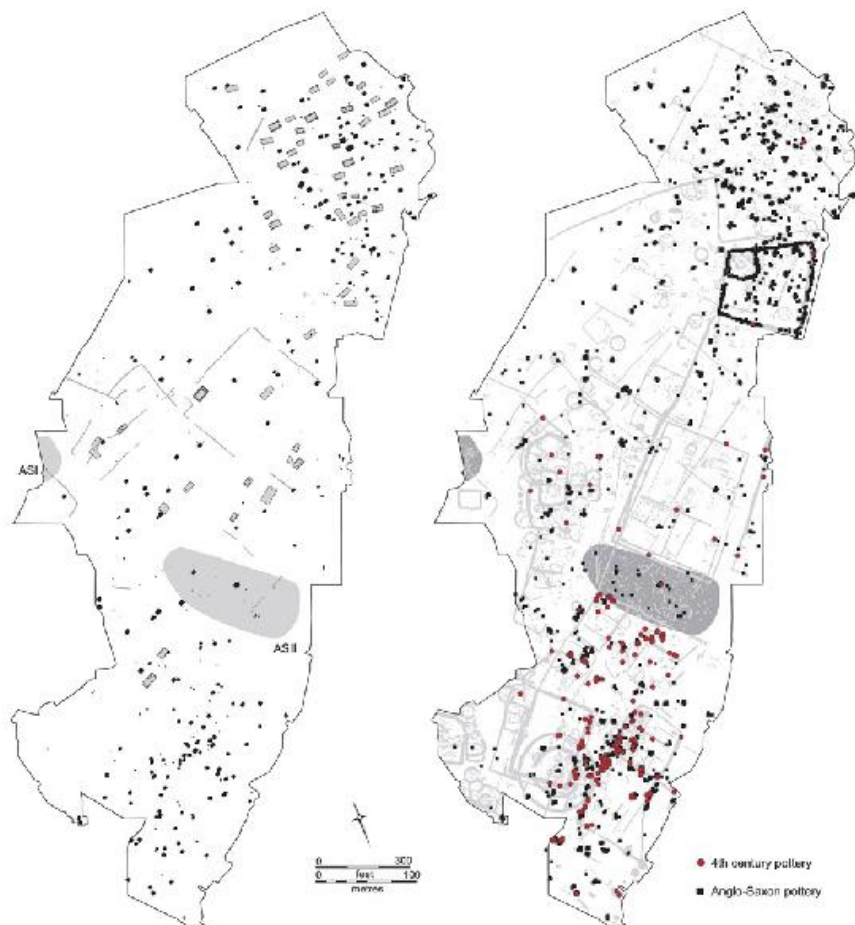


Figure 3.43. Anglo-Saxon settlement plan (left); right, site-wide distribution of fourth-century Roman and Anglo-Saxon pottery.

The assemblage from the Anglo-Saxon settlement at West Stow is interesting, as Plouviez (1985, 84) has compared its composition to later Roman assemblages from Icklingham. She concluded that the West Stow assemblage differed from a fourth-century settlement site assemblage in its bias against grey and later shell-gritted fabrics, and in its imbalance in parts of pots represented. She concluded that a 'normal' assemblage would display numerous body sherds, that rim sherds would outnumber base sherds, and therefore that the West Stow assemblage represented deliberate selection. Plouviez (1985, 84) thus argued that late Romano-British non-samian pottery found in SFBs at West Stow had a breakage profile (i.e. the proportion of rims vs bases vs body sherds) that represented deliberate curation or collection (that Anglo-Saxon settlement being located close to a

former Romano-British settlement). There were as many of these late red sherds in later SFBs as there were in earlier ones. The pattern at West Stow (Table 3.30) was contrasted with the Romano-British site at Icklingham: at the former site, rims and especially bases were preferentially collected. A similar pattern to Icklingham is reflected for Romano-British Mucking as a whole (Table 3.30). It is important to emphasise that this in itself is different from when whole vessels are destroyed and deposited *en masse*; the Well 4 assemblage at Mucking (which represents the clearance of a destruction event, where whole but broken vessels seem to have been deposited) gives us a comparative pattern for such an event (Table 3.30).

Table 3.30. Breakage patterns from Mucking compared with West Stow and Icklingham.

	Rims	Body	Bases
Roman GH	67	361	24
	15%	80%	5%
Other GH	71	235	59
	17%	69%	14%
Mucking all RB pottery	29%	11%	59%
Mucking Well 4	12%	44%	44%
Mucking late finewares (red)	24%	62%	14%
Mucking late finewares (non-red)	14%	78%	7%
IKL 063	22%	70%	8%
WEST STOW	19%	37%	44%

Table 3.31. Roman pottery from Grubenhäuser.

	GRY	LSH	NVCC	ROX	MH	Samian	POD	Imports	Other
Roman GH	381	19	1	1	8	1	5	0	32
	84%	4%	0%	1%	2%	0%	1%	0%	7%
Other GH	17	0	49	96	17	144	62	13	17
	4%	0%	12%	23%	4%	35%	15%	3%	4%

When we consider the breakage patterns for the later Roman fineware pottery at Mucking, it conforms more to the Icklingham

pattern than the West Stow one (Table 3.26). Looking at the red Oxfordshire colour coats, for example, we see 29% rims, 12% bases and 59% body sherds; this suggests more ‘normal’ deposition patterns rather than deliberate collection or curation. Similarly, Portchester D ware sees 16% rims, 9% bases and 75% body sherds; Much Hadham has 12% rims, 7% bases and 81% body sherds. The pattern for all the other later fine wares is similar, with a proportion of body sherds of around 70% or higher, except for those with very small numbers of sherds represented. It is of interest, however, that it is the red wares that see proportionately more rim sherds and bases represented than the non-red wares, and this may represent a later collection effect (Table 3.30). To investigate this in more detail we need to examine the contexts in which these sherds were found.

One way to do this is to examine the assemblages of Roman pottery found in *Grubenhäuser* at Mucking, to see whether a ‘normal’ or a ‘curated’ assemblage appears to be present. There is a slight complication to this, however, in that this Roman pottery within these structures appears to fall into two distinct camps: that from structures cut directly into Roman features, and from those that were not. Looking at the pottery assemblage from the two structure groups (Table 3.31) suggests that the former group displays a ‘normal’ settlement assemblage, with a predominance of grey wares (perhaps a result of pottery from the underlying ditches becoming later incorporated in the structure fill, or the fills not being adequately distinguished during excavation). The latter group, however, seems much more like the West Stow assemblage in terms of fabric proportions, with high numbers of colour coat sherds, including samian.



Figure 3.44. Late Roman pottery distributions (by ware-type; left); right, plot showing *Grubenhäuser* with high levels of Roman pottery values.

It does appear different, however, in terms of the parts of vessels represented (Table 3.31). Both in the ‘Roman’ *Grubenhäuser* and in the other group, these Roman sherds have a ‘normal’ breakage pattern, with at least 69% body sherds, and higher proportions of rims than bases. Either the usual selection practices for Late Roman pottery in Anglo-Saxon features were not being followed, or these Late Roman vessels were being used and broken in everyday ways. Just 7% of these later Roman sherds were recorded in the Mucking dataset as being abraded (86 of 1213); this compares to a site average of just under 2%, and 3.5% of the specifically fourth-century sherds. However, this appears to be restricted to certain fabrics: 19% of all the red Oxfordshire colour coat was abraded (97 of 501 sherds; 14% of which were recovered from *Grubenhäuser*), compared to 3% of the Much Hadham products (18 of 590), 2% of Nene Valley colour coat products (9 of 394 sherds) and no abraded sherds at all in Portchester D ware. Similarly, 7% of the samian from the site was recorded as abraded (197 of 2691), but 23% of that in the *Grubenhäuser* (34 of 145 sherds).

It appears as if bright red wares were being targeted for selection

during the Anglo-Saxon phase of the site (and were more likely to be abraded), but that other fabrics formed part of the domestic repertoire, with less abrasion, and seeing more 'normal' breakage patterns. What we do not appear to be seeing, in the 'non-Roman' feature *Grubenhäuser* is any redeposition of Roman midden material back into the fills (as might be argued for the structures dug through Roman features); the comparative lack of any grey wares demonstrates this conclusively.

Interestingly, the pattern for samian in *Grubenhäuser* is different: 23% rims, 20% bases and 57% body sherds – could there be a combination of redeposition and curation involved here, given the cessation of samian supply to the site in the third century AD? Several *Grubenhäuser* in the northern part of the site have occasional sherds of samian and/or red Oxfordshire colour coats, but all of the *Grubenhäuser* with four or more sherds of later fourth-century pottery are situated in the southern part of the site (where Hamerow 1993 argued the earliest Anglo-Saxon phases of settlement were to be found).

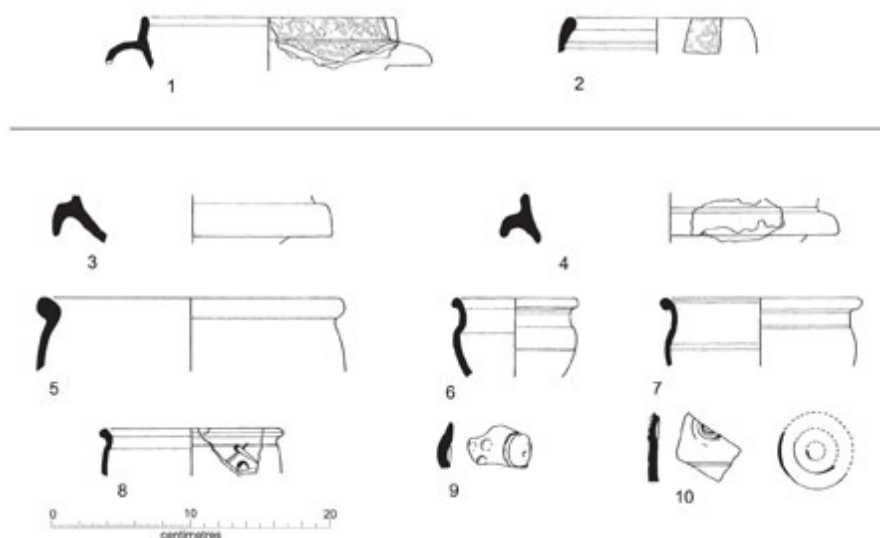


Figure 3.45. Selected Late Roman pottery: *céramique à l'éponge* (top); below, Much Hadham wares (note that the few Mayen Wares from the site that were drawn are not particularly convincing; however, these were apparently viewed by Mike Fulford and their attribution as such was confirmed: pers. comm. and see Fulford & Bird 1975). Key: 1) No. 4962, 295N/310E, RBI, level 2; 2) No. 4961, 110N/470E, GH57, level 3; 3) No. 4966, 156N/354E, RBII, level 1; 4) No. 1933, 560N/300E, ditch D15, surface; 5) No. 1955, 205S/430E, Well 7, Fill B; 6) No. 4979, 170N/360E, RBII, level 1; 7) No. 4979, 170N/360E, RBII, level 1; 8) No.

Such structures include GH57, with its distinctive fifth-century Anglo-Saxon pottery assemblage of mainly sandy fabrics and carinated vessels with a high proportion of coarse-slipped (*Schlikung*) and burnished vessels, later fourth- to fifth-century belt attachment, Romano-British shale bracelet fragments and scattered Romano-British coin hoard dating to the later fourth century (22 coins, of which the latest was AD 367–75); there was also an elongated triangular comb of probable fifth-century date. The later Roman pottery also recovered from this feature comprised five sherds of *céramique à l'éponge*, nine sherds of Portchester D, six sherds of red Oxfordshire colour coat, three of Nene Valley colour coat and one of Much Hadham ware. Hamerow actually assigned GH57 to the sixth century, on the basis of the solitary sherd of a probably Frankish vessel (possibly a bottle); this was a large fresh sherd with a raised rouletted cordon, for which no parallels from England were known (Hamerow 1993, 22). Hamerow suggested that this could be related to the mid to late sixth-century products of the Artois region, but acknowledged that exact parallels were hard to find, and that the closest parallel (which was still stylistically different) was the biconical vessel from Gr212 at Krefeld-Gellep, which Pirling (1966, taf. 19, 133) dates to the sixth century. Setting aside this rather tenuous parallel, GH57 would sit more comfortably in a very early fifth-century setting, alongside some of the earliest inhumation graves at Mucking (see below).

Another possibly very early *Grubenhaus* is the nearby GH55, which contained a Late Roman penannular brooch and steelyard in its fill, along with 15 sherds of Portchester D ware, five of red Oxfordshire colour coat and one of Nene Valley colour coat; its Anglo-Saxon pottery comprised carinated and simple grooved wares suggestive of an early fifth-century date (see now Hills & Lucy 2013 for revised Anglo-Saxon pottery chronologies). Neither of these structures cut through Romano-British features.

There would thus seem to be fairly strong evidence to suggest that part of the later Roman pottery assemblage at Mucking was in use at the same time as the earliest Anglo-Saxon structures and pottery at the site, presumably in the early fifth century (but possibly the later fourth century: see [Chap. 5](#)). The distribution of these sherds is largely confined to the fills of Anglo-Saxon *Grubenhäuser* in the southern part of the site, and upper ditch fills in the same area, particularly those of RBI, RBII, the 'F' ditches and the rectilinear ditch D15 ([Fig. 3.43](#)).

A strikingly similar pottery assemblage has been reported from Ship Lane, Aveley (Foreman & Maynard 2002, 144–6). This comprised

small amounts of Late Roman shell-tempered ware, Portchester D ware, red Oxfordshire colour coat and Alice Holt grey ware, but with no obviously locally made vessels; there were no Nene Valley colour coats or Much Hadham wares at this site. Foreman & Maynard argue that this assemblage may represent an early fifth-century one, with the fabrics represented being those whose production is argued to carry on well past AD 400. A similar argument has been put forward for a variety of very late fourth- to fifth-century assemblages in an unpublished paper by Scott Martin, which suggests that these regional imports continue being produced and used several decades after the demise of any local grey ware industries. This would accord well with the lack of grey ware in the 'non-Roman' *Grubenhäuser* at Mucking. Finally, Pit 14529 at Elm's Farm, Heybridge contains a large amount of latest Romano-British forms and fabrics (Key Pottery Group 40) alongside a large Early Anglo-Saxon pottery assemblage, although the authors suggest the Romano-British pottery may be residual on this basis (Biddulph forthcoming).

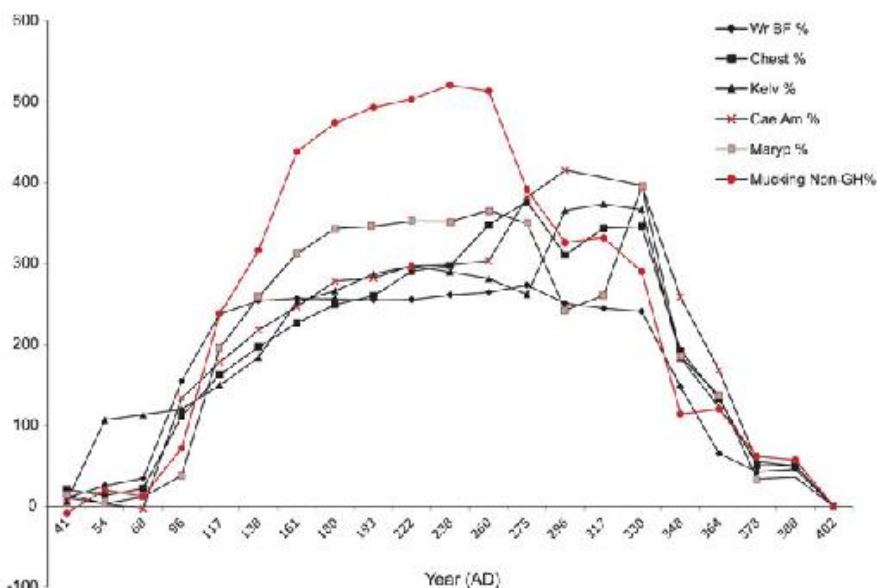
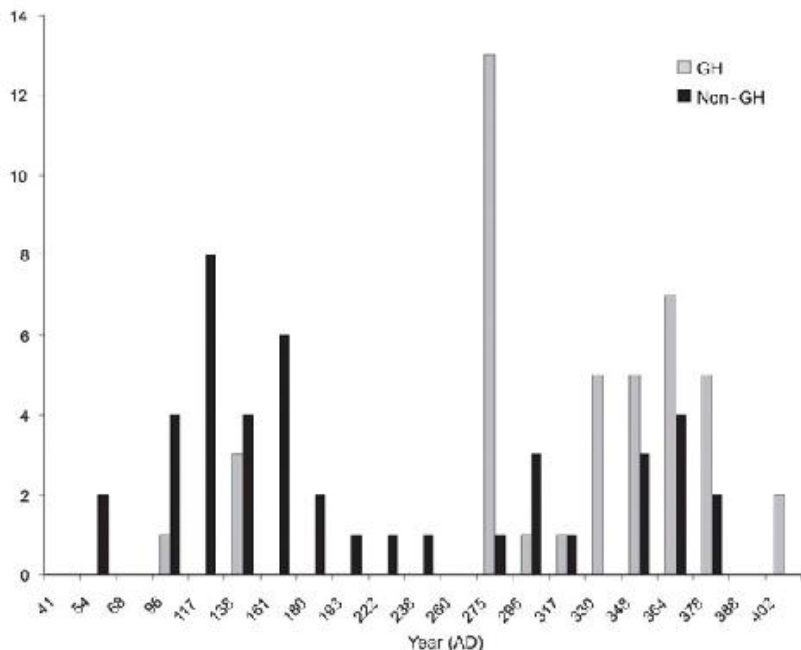


Figure 3.46. Roman coin profile showing Grubenhäuser vs. non-Grubenhäuser finds (top); below, adjusted coin profile for non-Grubenhäuser coins (after Reece 1995).

The precise chronology/attribution of this fourth- to fifth-century ‘overlap’ and whether it should, in effect, be considered the site’s

earliest Anglo-Saxon occupation or its latest Roman – and whether it warrants designation as a distinct phase in its own right – are issues that we will return to in the final chapter. Indeed, this question also demands some re-examination of the Anglo-Saxon burial evidence: to what degree do the Roman items included as grave-goods reflect collection/curation or other mechanisms?

Notes

1 For Continental parallels to the ring note Steiger (1966) no. 10 and pls. 8 and 11 and Henkel (1913) no. 414 (from Friesdorf near Bonn); 415 (Augst) and 421 (Rhineland); Henkel's Plates XX–XXII demonstrate the changes of form mentioned below.

2 For cupids in general cf. Richter (1956) nos. 304–17; Walters (1926) nos. 1465–1534. In Britain: Henig (1974–2007) nos. 109–41.

3 Note especially Charlesworth (1961) 28 no. 60 from Newcastle, where a cupid holds up a bunch of grapes to a mask of Silenus placed on a cista, and Henig (1974–2007) no. 117 (from Wroxeter) showing two cupids, one of whom has put on a large Silenus mask with which he frightens the other.

4 In addition to the metalwork reported here, some 110 fragments and pieces of copper alloy were recovered from *Grubenhäuser*. The vast majority of these pieces were found to be undiagnostic for dating purposes and many pieces are listed, but not illustrated under individual *Grubenhäuser* in Hamerow (1993). Aside from the steelyard arm (GH55) that is reported upon here, several pieces found in *Grubenhäuser* were clearly identified as Roman in origin and include: a pin (GH8), two bracelets (GH10 & GH51), a suspension loop (GH22), a ligula (GH36) and tweezers (GH43), a disc belt fragment (GH57; also found with 22 Roman coins, five glass beads and fragments of two shale bracelets – see Going 1993b), two copper alloy rim fragments from a probable vessel or vessels (GH84) and a key (GH169).

5 Both this and No. 98's spindlewhorl were recovered from the 'Antler' ditch, which was evidently a focus of Late Roman/earliest Anglo-Saxon activity (see *Distributions and Case-studies* below concerning what was clearly Anglo-Saxon recycling of the site's Roman lead).

6 Having since viewed Mucking's querns, while Chris Green has pronounced that the assemblage includes no French-source puddingstone, there are nine Worms Heath Puddingstone querns (WHPs). Originating from Surrey, this is apparently the largest total coming from a site apart from Springhead, on the opposite side of the Thames. Indeed, he thinks that, had it not been for

Mucking's aggressive soil conditions (WHPs are not silica-cemented like their Herts. counterparts), the site's total would have been higher (pers comm. and forthcoming).

7 There were 18 saddle quern and 61 rotary quern pieces from Early Anglo-Saxon contexts at Mucking, either within the *Grubenhäuser* or in the 52 definite and possible pits of that date. It has already been suggested that most of these are of variously of prehistoric or Roman date and residual in these contexts. Many of the pieces are small and it is possible that they were collected from Roman occupation areas for re-use. Sandstone was suitable for whetstones and lava for its qualities as pumice stone; larger pieces could have been used for post packing or possibly used as hearthstones. It can be noted that fragments from two sarsen and two shelly limestone rotary querns came from Anglo-Saxon features. These stones are likely to be Roman, but as uncommon stone types they could represent rare finds of Early Anglo-Saxon rotary quern.

The nine lava quern fragments from Medieval contexts are all associated with the windmill site (see summary in Prehistory Vol., chap. 6). They are too fragmentary to provide any information on the forms present, but are probably the remains of Medieval millstones rather than residual Roman querns.

8 At only a relatively small number of UK Roman sites has good evidence been found for the existence of either a watermill (e.g. Haltwhistle Burn Mill: Simpson 1976 and Ickham: Spain 1984) or a geared animal driven mill (e.g. Stanwick: Neal 1989). However, there are hundreds of other sites from which grind stones have been excavated which have diameters and/or a thickness which is considered to be more substantial than would be appropriate for a rotary quern operated by a single person. These finds point to a widespread use of mills to achieve greater motive power but to date these finds have received limited detailed study, most reports simply noting that they are present. Nor is there any established view on the point at which a particular stone might have been too large to be turned by hand. David King in his surveys suggested that 560mm might be a significant diameter (King 1982, 80; also in a 1999 draft for an uncompleted post-graduate study on 'Mechanised Corn Mill in Roman Britain' which identified 210 certain or possible millstones from 116 separate sites based upon diameter, thickness, size of the central hole and rock type). The authors have in numerous reports noted stones of 600mm diameter and have done so again in this report.

9 The main samian report was originally written in 1982; only the discussion, the stamps report and the catalogue of illustrated

samian was revised in 2015.

10 No amphora sherds appear to have been illustrated during the MPX programme.

11 Apparently drafted in 1981, missing data added as necessary; see Fig. 3.33 for overall distribution.

12 See also, for example, Shaffrey in Biddulph *et al.* 2012 (152–4, fig. 6.52) and Turner 1999, 190, fig. 123.

13 Note that Going instead assigned this feature an Early Roman date during his spot-dating exercise using the site notebooks (pottery from this feature was not recorded by MPX).

14 Given its location along the site's northernmost margin, there is no question of this being an 'earliest' Anglo-Saxon context (see below).

15 Another great pit deposit that could be cited here is pit 581 at Monkton on the Isle of Thanet, which been infilled by the mid third century. Aside from an array of small finds, animal bone and burnt daub, this 1.35m-deep feature yielded 6,427 sherds of pottery (c. 97kg), of which 215 were samian (Bennett *et al.* 2008, 154–5, 170–81).

16 Only half the 1129 amphorae fragments seem to have been recorded within the MPX data, of which at least 125 were recovered from Well 4.

17 We should note here that this interpretation of dating contradicts that within the recent publication at Stanford Wharf (Biddulph *et al.* 2012), where grey ware production at the Mucking kilns was seen as extending beyond this. The internal evidence from Mucking would now suggest that the Stanford Wharf sequence is in need of some revision.

The Cemeteries

Having outlined the site's settlement sequence and its finds – and explored aspects of their depositional dynamics – it is at this point that its cemeteries require presentation. Mucking's five main Romano-British cemeteries (I–V) were located in very different areas of the settlement ([Fig. 4.1](#)). Cemetery I occupied an existing Iron Age enclosure at the far southwest of the excavated area (the 'ABC Enclosures'), lying just above the 32m contour-line; this contour, wrapping around the terrace-top just to the west of the site, was also where Cemeteries II, within the main Central Enclosure, and III (within a former Early Roman enclosure) were situated. The subsoil in this area was gravel trailed with sand, accounting for the extremely poor preservation of inhumed bone, with virtually no survival of non-cremated human remains in these cemeteries. Even the cremated bone, where it did survive, was in poor condition. Cemetery V lay on the top of the terrace, above the 33m contour-line. Again on the gravel, its bone preservation was poor. Presented in summary in the Prehistory Volume, this

cemetery is dated to the Conquest Period. Cemetery IV lay in a slightly different location: on the eastern downslope of the terrace-top, between 28m and 30m OD. This slope had a gradient of 1:10 in the area of Cemetery IV. The subsoil there was brickearth; this ensured that the cemetery had not been visible in any aerial photographs (unlike many of the Romano-British and Anglo-Saxon inhumation burials further up the slope), but its bone preservation was significantly better (this was also enhanced for the solitary inhumation, the stone coffin burial, by its own internal preservation conditions). Isolated burials, and those in small groups, were scattered across the site, although the majority were located at 32m OD or slightly above. These comprised both inhumation and cremation burials.

Coming to the archive afresh in 2007, the CAU team came upon a number of 'RB Cemetery' folders, which contained all the relevant notebook entries for each grave, together with publication standard drawings of most of the grave- and pyre-goods, and inked-up burial plans and sections. These were organised by cemetery, and were accompanied by computer printouts of standardised burial data. There were further folders of human bone and pottery recording sheets. In addition, there was a rough draft of a gazetteer for the four cemetery groups (based on work by Rosemary Jefferies, with additions by Chris Going). It is these sources that have been drawn upon in compiling the final gazetteer entries for the burials, and in the main it is these original illustrations that have been used, with just some additional gravegoods illustrations completed in 2008.

During MPX, specialist reporting on the finds from the Romano-British cemeteries had not been carried out alongside those from the settlement. While the settlement pottery, for example, was fully catalogued and computerised (see [Chap. 3](#)), the cemetery vessels were not included within the database (the only cemetery pottery included is three curated/residual Romano-British sherds recovered from Anglo-Saxon graves). The archive contained some initial work by Tom Jones on the pottery, including brief descriptions and some measurements, with fuller recording made by Jefferies on pottery from three of the cemeteries during her work at MPX and BM/EH from 1984–6 (Tom Jones being somewhat notorious for wanting to keep control of the cemetery material). The samian vessels had, however, been fully catalogued by Joanna Bird, and the stamps reported on by Brenda Dickinson (alongside the settlement material; their reports were updated in 2008 for publication – see [Chap. 3](#)). All the pottery descriptions were checked and amended by Jefferies in 2008, with new descriptions written for vessels from the isolated burials and from burials in Cemetery IV. Form codes have been added to Mucking products, in order to facilitate comparison with the pottery recording from the settlement (see [Chap. 3](#)).



Figure 4.1. Location of the Romano-British cemeteries at Mucking, against all Roman phases.

Table 4.1. Numbers of cremations and inhumations associated with each cemetery.

	Cremations	Inhumations	Date Range
Cemetery I	10	64	Later first to later third/early fourth century AD
Cemetery II	18	11	Later first century AD to later third century AD
Cemetery III	11	14	Later first to second century AD
Cemetery IV	18	1	Mid second to early third century AD + late fourth century AD
Cemetery V	2	10	First century AD
Isolated	15	1	First to later second/early third century AD
TOTAL	74	101	

Charcoal included within graves and cremations was identified alongside that from the settlement, and this data has been recovered from the MPX computer records. The cemetery ironwork had also been fully catalogued, by Quita Mould in 1984 (who has therefore been able to draw on this data in her new discussion of coffins and containers within this volume).

Although other specialist work was commissioned on specific graves or cremations (for example, the various reports on the ‘epula’ deposit, Cremation 911, and for the stone coffin burial, Grave 1086), there were lacunae in the reporting of the grave-goods as a whole. Little formal reporting was carried out on the metalwork found as grave-goods and pyre-goods, and this has been newly commissioned, as have reports on the few glass vessels from the cemeteries.

We took the decision to treat each cemetery as a separate entity, given their obvious differences in date, status and location: the ‘poor’ cremations in Cemetery I (late first- to second-century), Cemetery III (second-century) and Cemetery V (first-century) contrasting with the ‘richer’ cremations in Cemetery

IV and, especially, some of those in Cemetery II, in what is interpreted as the main settlement enclosure. The majority of the inhumations are found in Cemetery I (late second- to fourth-century), with a few – of variable status – in each of the other cemetery areas ([Table 4.1](#)).

Each cemetery is therefore provided with an overall cemetery description and discussion of particular excavation circumstances and location, followed by a full gazetteer of burials. These give a detailed description of each burial (with the pottery vessels and other associated material being given full catalogue entries within these). Then a wide-ranging discussion is provided of the way in which each cemetery was structured, looking at the incidence of the various burial rites employed, and whether chronological, sex- and age-related distinctions can be seen. While this treatment of burials as individual ‘events’ is still a relatively unusual approach for Romano-British burials (where often the pottery sequence has been considered all-important), it is becoming more common.

Burials are individually numbered (these numbers correspond to those issued in the field, or occasionally in post-excavation). Each gazetteer entry describes the type and location of the grave, the grave pit and its fill, any associated grave furniture such as coffins, associated grave-goods or pyre-offerings, and any described cremation urns or other accessory vessels. Date ranges are given for each individual dateable object, allowing an estimation of the date of the grave itself to be made. Finally, the human remains are described. For inhumations, this is a description of any

surviving bone and/or the location of staining that can help to indicate the position and orientation of the body within the grave. For cremations, the weight of human bone is included, as this can be informative about a number of cultural and taphonomic factors; any osteological information is likewise included here. Dr Jo Appleby has examined the archive, and has concluded that the human bone was systematically analysed by a Dr Zuvanovich, using a standardised form, with ages as detailed in [Table 4.2](#).

The age ranges and categories indicated here for adults do not tie in with standard osteological categories, and this has had to be taken into account in the preparation of this material for publication. There is no indication in the archive of the exact methods used for either ageing or sexing, but it is evident from the report that more than one method must have been used (according to which parts of the skeleton are preserved). Sexing of cremated skeletons should be regarded with at least a degree of suspicion, as at least one sex identification was based upon metrical data, which is somewhat unreliable when bones have been burnt (and are hence cracked and shrunk). In this report, we have reproduced the age and sex identifications as reported in the archive (although *Maturus*, *Adultus* and *Senilis* identifications are all given simply as 'Adult'), but offer them with the 'health warning' above. The exception to this is where ageing as derived from the dental report contrasts with that from the bone report (as, for example in several of the graves in RB Cemetery V); where this occurs, the size of any body stain present

has been used as a guide.

Table 4.2. Age ranges used.

Category	Standard Age Range	Mucking Age Ranges
<i>Infans I</i>	1–7	1–7 years
<i>Infans II</i>	7–14	8–15 years
<i>Juvenis</i>	14–20	16–25 years
<i>Adultus</i>	20–40	25 +
<i>Maturus</i>	40–60	c. 45 +
<i>Senilis</i>	60–80	Not stated

Throughout the text that follows, specialist reporting on the majority of the pottery is by Rosemary Jefferies, with that for the samian and its stamps by Joanna Bird and Brenda Dickinson; brooch descriptions and that of the solitary Iron Age coin are by Colin Haselgrove, with those of other metal gravegoods by Grahame Appleby; Jennifer Price kindly updated the existing reports on the glass, while other specialists are acknowledged individually in the text.

Before progressing, we should note that there is ambiguity concerning the attribution of a number of the site's interments. As outlined in [Chapter One](#), not only does this include Romano-British Cemetery V in the Western/Belgic Banjo Enclosures (likely to have Late Iron Age origins, it is also assigned as Prehistoric Cemetery III) and Prehistoric Cemetery V – its cremations generically assigned to the Conquest Period, but having only negligible dating evidence – but also five graves located variously within the ditches and southern portion of the Iron Age ABC

Enclosures and adjacent Romano-British Cemetery I. Lacking dating evidence and sharing crouched/ flexed body positions, a number were thought by their excavators to be Iron Age/Prehistoric (see Prehistory Vol., [figs. 4.38–9](#)), with a flexed burial within the primary fills of the nearby RBI Enclosure also considered to be Iron Age (*ibid.*, [fig. 4.43](#)). The assignments of all of these interments can only be considered tentative. Having said that, in recent years the extent of Iron Age inhumation rites has become increasingly apparent (e.g. Hey *et al.* 1999), especially in Kent (Champion 2007, 123; Booth *et al.* 2011, 235 & 311; Stevenson 2013, 151).

Cemetery I

Situated in the extreme southwestern corner of the site, Cemetery I was one of the first discoveries at Mucking. Excavation of its early graves was carried out under harsh and sometimes atrocious weather conditions in the winter of 1965–6. Found during the 1965 trial excavation, excavation of Cemetery I (alongside other features) ran for a total of eight months following the 1965 barley harvest, and graves were excavated after the removal of topsoil. The winter was very hard and the gravel subsoil froze to a depth of over a foot in places. On at least one occasion a burial (Grave 15) was treated with industrial salt in an attempt to defrost the ground before excavation, although this was not successful. An article in *The Times* on May 29th, 1966 summarised the situation: “Drought and hard sunlight, even saturation and sun, reduce almost to invisibility the colour and texture

contrasts of the soilmarks. Differential thawing of the frozen site led to the recognition of several graves”. Trowelling was clearly impossible at times and graves had to be largely picked if they were to be excavated at all. Some graves were excavated under shelters (e.g. Graves 33 & 34).

Cemetery I was located within an existing substantial Iron Age enclosure that formed part of the ABC Enclosures (Fig. 4.2). The cemetery seems to have seen two distinct phases of burial: a small cluster of 10 cremation burials (with 12 individuals identified) dating to the later first and earlier second centuries AD, and a larger and more spread out inhumation burial area, with 64 inhumations dating from the early second to later third or fourth centuries AD. It is possible that further cremations once existed, and were truncated or destroyed by the overlying inhumation graves in this area. These two rites will be described and discussed below, with cremation burials followed by inhumation burials in the catalogue.

Grave Catalogue

Cremation 25. (354N/-122E) Adult Male Fig. 4.3

NB 5.10–12

Grave pit: Elongated oval pit, just large enough for main cremation vessel (25.1) and accessory beaker (25.2), which were both upright and almost touching. 0.38 × 0.28m, depth uncertain.

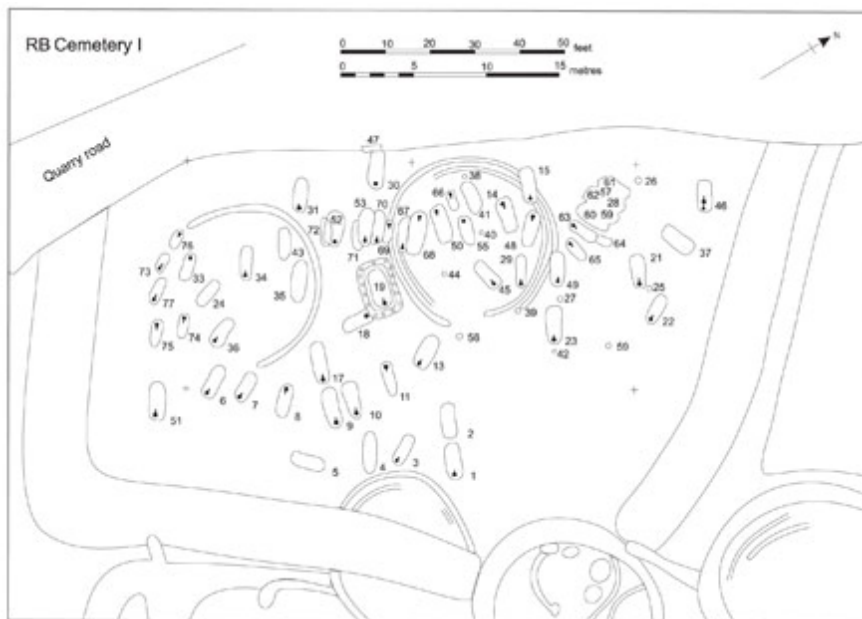


Figure 4.2. Plan of Cemetery I.

Grave fill: Dark brown sandy loam with ?charcoal flecks and residual IA sherd surrounding both vessels; main cremation vessel contained brown earth and pebbles, while the accessory vessel contained chocolate brown sandy loam.

Grave goods:

25.1 Large everted rim storage jar in GVC fabric. Burnished slip on the shoulder. A cordon at the base of the neck. Badly damaged and worn; rim/base of neck missing; ?second. (Rim 260mm; Base 102mm; EVE 0.08). Mucking Kiln product (DA01). AD 50/60–110/20.

25.2 Small cornice rim bag-shaped poppyhead beaker in GFN fabric. Four bands of barbotine dot decoration; small foot-ring (Ht 91mm; Rim 70mm; Base 39mm; EVE 0.15). North Kent or Highgate product (NL03). Marsh and Tyers Type III.E.1. AD 80/90–160.

Bone: Good preservation; incomplete burning; white in colour; 470g; Max L. 56mm.

Cremation 26. (352N/-148E) Adult Male. Cremation 26a
Child (Infans) (Fig. 4.3)

NB 5.1, 5.13, 5.15

Grave pit: Roughly circular, with sloping sides and rounded base. Area of bones and charcoal in centre, with pot placed to one side. $0.53 \times 0.53 \times 0.1$ m deep.

Grave fill: Dark brown loamy fill; some pinkish soil may suggest burning *in situ*. Bone was more concentrated in the northern half of

the cremation pit. Oak charcoal recorded (50 + pieces). Ground frozen up to 10cm deep.

Grave goods:

26.1 Carinated narrow-necked jar in GFN fabric; dash rouletting on upper body above carination (Ht 141mm; Rim 40mm; Base 48mm; EVE 0.25). North Kent product (KC02). AD 70–130. Vessel does not appear to have been used as a cinerary urn, as only brown fill and no cremated bones were found inside; it appears to have been placed upright on the margins of the grave pit.

26.2 Copper alloy brooch (AML No. 12/651; Mucking Cat. No. 65/1), probably placed with the bone fragments (recovered from a frozen chunk of earth that also produced human bone and charcoal). Colchester-derivative brooch lacking pin and part of spring. Plain bow with 'D'-shaped section; solid catchplate, with impressions of two holes not punched out. Wings over spring of at least six coils. Head lug pierced by external chord; also axial bar in Harlow manner. L. 42mm. Mid to late first century AD.

Bone: Record of bone fragments set roughly centrally in grave. Rib fragments noted as crossed in centre of burial may have been deliberately placed. If so, this is one of the earliest instances of this fashion (crossed bones). Other bone fragments were found in the fill of the grave pit. Bone report suggests two individuals are represented. Adult: poor preservation, complete burning, white/blue in colour, 148g, Max L. 81mm. Child: poor preservation, complete burning, white in colour, 15g, Max L. 2.4mm.

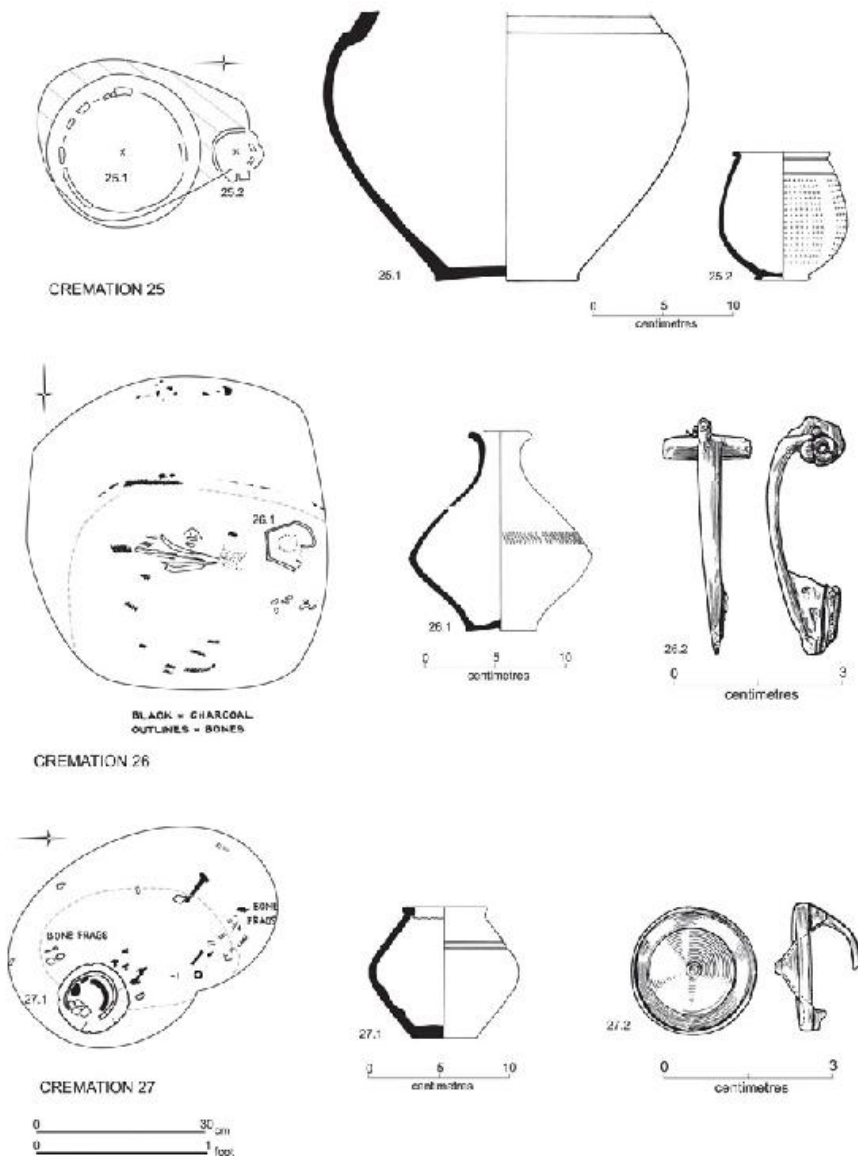


Figure 4.3. Plans and grave-goods from Cremations 25, 26 and 27.

Cremation 27. (334N/-119E) Adult (Fig. 4.3)

NB 5.1, 5.14

Grave pit: Roughly circular, with sloping sides and rounded base. The pottery vessel was placed on top of the cremation, which appears to have been piled around its base, but there is also a suggestion that some bones had been placed inside. $0.51 \times 0.3 \times 0.09\text{m}$ deep.

Grave fill: Soft dark brown sandy loam; not much charcoal but bones distributed throughout the fill. A single iron nail was also recovered.

Grave goods:

27.1 Small narrow-necked globular jar in GFN fabric. Burnished from inside rim to shoulder; two deep incised grooves on lower shoulder. Worn (Ht 92mm; Rim 75mm; Base 44mm; EVE 0.9). Not a Mucking product. Similar forms occur in north Kent. AD 70–120. Pot stood upright at one side of the grave pit, though was slightly crushed (broken at shoulder) and rim somewhat fragmented.

27.2 Copper alloy brooch (AML No 2/653; Mucking Cat. No. 65/3). Disc brooch with conical centre with moulded tip, hollow behind; narrow raised rim. Otherwise plain. Part of pin, two-lug hinge attachment and catchplate survive. Diam. 23mm. “Buckler” or “Tutulusfibel”. Feugère Type 25a; Feugère (1985) suggests they originate in east-central France. Dating: late first- to mid second-century AD. Found with the bone deposit (outside the vessel).

Bone: Poor preservation, incomplete burning, white/grey/ black in colour, 590g, Max L. 46mm.

Cremation 38. (312N/-147E) Child (Infans) (Fig. 4.4)

NB 5.29–30

Grave pit: Sub-circular, $0.3 \times 0.23 \times 0.06$ m deep.

Grave fill: Dark charcoally fill, with cremated bone, two nails and two or three burnt flints.

Grave furniture: None, unless the nails represent a bier. *Grave goods:* None.

Bone: Cremation burial in poor condition (68g survived); complete burning, white in colour; Max L. 20mm. Identified as *Infans*.

Cremation 39. (325N/-116E) Adult (Juvenilis). Cremation 39a. Adult Male (Fig. 4.4)

NB 5.29

Grave pit: Oval, with pottery vessel set tightly within it. $0.58 \times 0.53 \times 0.38$ m deep. Cuts MIA PG20.

Grave fill: Ashy, charcoally fill, with fire-reddened, and fireblackened pebbles. Cremated bone found above and around vessel, not contained within it. Residual IA and RB sherds.

Grave furniture: Three nails found. No sign of casket or box.

Grave goods:

39.1 Storage jar in GVC2 fabric (similar to storage jars 40.1 and 59.1). Wide cordon near neck with cross-hatched line decoration; the decoration goes clear of the cordon (Ht 280mm; Rim 214mm; Base 120mm). Kiln waste second, but part of vessel heavily oxidised, perhaps placed on pyre. AD 70–150.

Bone: Poor survival, 480g, longest piece 66mm; identified as

Juvenilis. Zuvanovich refers in his notes to the presence of bone from a burial 39A, with poor preservation, complete burning, white in colour, 1180g, Max L. 163mm. Two individuals seem to be represented here.

Cremation 40. (316N/-133E) Adult Male (Fig. 4.5)

NB 5.30, 5.32

Grave pit: Irregular circular pit with steep sides and rounded base, $0.61 \times 0.61 \times 0.61$ m deep.

Grave fill: Fine brown silt/sand fill. Pea-grits found in the bottom of the pit. Also noted were fire-cracked flints. Both the urn and the beaker (which were not touching) had been pressed down into a deposit of pebbles, dark earth and cremated bone fragments (which appears to have been a single deposit, as thoroughly intermixed), and the urn was supported in place by large residual RB sherds. Very few bones in the lower part of the jar fill (?ash); brooch found in upper fill (identified after vessel x-rayed and excavated in lab).

Grave furniture: Two nails noted. There was no sign of a casket.

Grave goods:

40.1 Storage jar in GVC2 fabric, used as a cinerary urn (Ht 154mm; Rim 149mm; Base 77mm). AD 70–150.

40.2 Carinated fine grey ware beaker used as an accessory vessel (Ht 80mm). Cam 212. Similar form to Skeleton Green 97.44. Gallo-Belgic form (PA01). AD 50/60–80/90. Rim broken and side adjacent to urn cracked.

40.3 Copper alloy brooch (Mucking No. 65/7 AML No. 384), found in vessel 40.1. Complete hinged asymmetrical plate brooch with enamelled lozenge-shaped field and zoomorphic foot. Slim rectangular head, folded over to house hinge pin. Lozenge-shaped field has external rim with incised linear decoration; four 'L'-shaped panels (white?) surround a central diamond (red). A moulding separates the foot, which has incised 'scale' decoration, terminating in a snake's head, with the catch-plate behind. L. 38mm. No sign of burning. Feugère 26b2a, Dating: late first- or second-century AD; for a parallel from Colchester, see Hull 1958, 117, fig. 47.3, and also from London (Wheeler 1930, 90, fig. 24.6–9).

Bone: The cremation was incompletely burned, white/grey in colour; 810g, pieces ranged up to 76mm in length. Adult (from the size, structure, and shape of the bones), and male (on the basis of a femur fragment with a solo diaphyseal angle of 155 deg., and morphological characteristics of the heads of femur and humerus; a more detailed report can be found in the archive).

Cremation 42. (333N/-108E) Adult (Fig. 4.4)

Grave pit: Heavily truncated, leaving just a vessel base *in situ*.

Grave fill: Not recorded, but bones found both in pot and in grave pit.

Grave goods:

42.1 Base of a storage jar in GVC2 fabric (Base 92mm). AD 70+.
Local product.

Bone: Poor survival, complete burning, white in colour, 18g, Max L. 36mm.

Cremation 44. (310N/-125E) Child (Infans II) (Fig. 4.4)

NB 5.35

Grave pit: Roughly oval, with sloping sides and rounded base, $0.61 \times 0.46 \times 0.19$ +m deep, damaged by ploughing. Possibly dug into natural hollow.

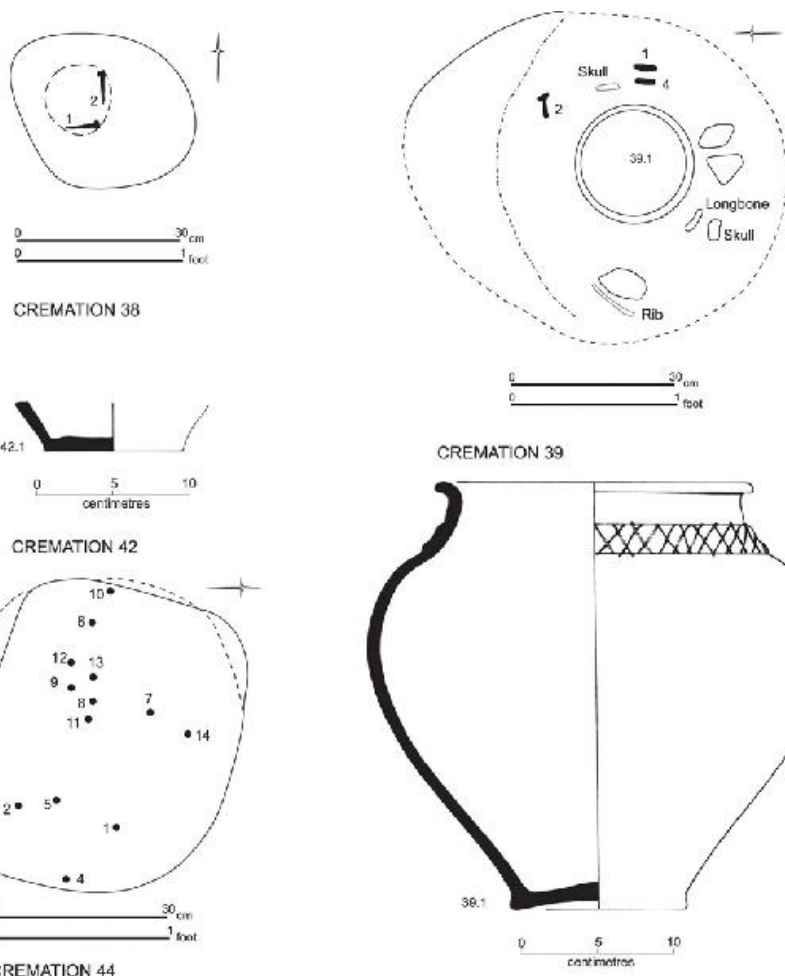


Figure 4.4. Plans and grave-goods from Cremations 38, 39, 42 and 44.

Grave fill: Compacted dark earth and charcoal together with fire-

cracked and dark burnt flints. Disturbed by an animal burrow. Pea-grit lenses towards the base of the pit.

Grave furniture: Fourteen small (up to 31mm) nails found, possibly from a box or casket, but their positions were random, and some were found in the overlying baulk, perhaps as a result of animal burrowing.

Grave goods: None noted.

Bone: Generally scattered. Poor survival; complete burning; white in colour, 17g, Max L. 8mm.

Cremation 56. (311N/-111E) Adult Male (Fig. 4.6)

NB 5.44

Grave pit: Oval, with vertical sides and flat base. $0.61 \times 0.41 \times 0.3\text{m}$ deep.

Grave fill: The pit bottom was very pebbly, over which was a very sandy fill with occasional flecks of charcoal; two IA sherds in fill are probably residual.

Grave furniture: Single nail found, probably bier fitting.

Grave goods: None.

Bone: Cremation, with good survival (1.25kg), which included several large broken pieces ('carefully arranged'), max L. 88mm. Incomplete burning, white in colour.

Cremation 59. (345N/-108E) Adult Male (Fig. 4.6)

NB 5.42

Grave pit: Oval rounded-bottom hollow, $0.6 \times 0.56 \times 0.25\text{m}$ deep.

Grave fill: Dark fill; cremated remains and vessel resting over fire-reddened flints. Vessel not used as a cinerary urn, but lay beside the cremation at the same level, resting against the side of the pit.

Grave furniture: Three nails found. They appear to have no deliberate position. Possibly part of a bier?

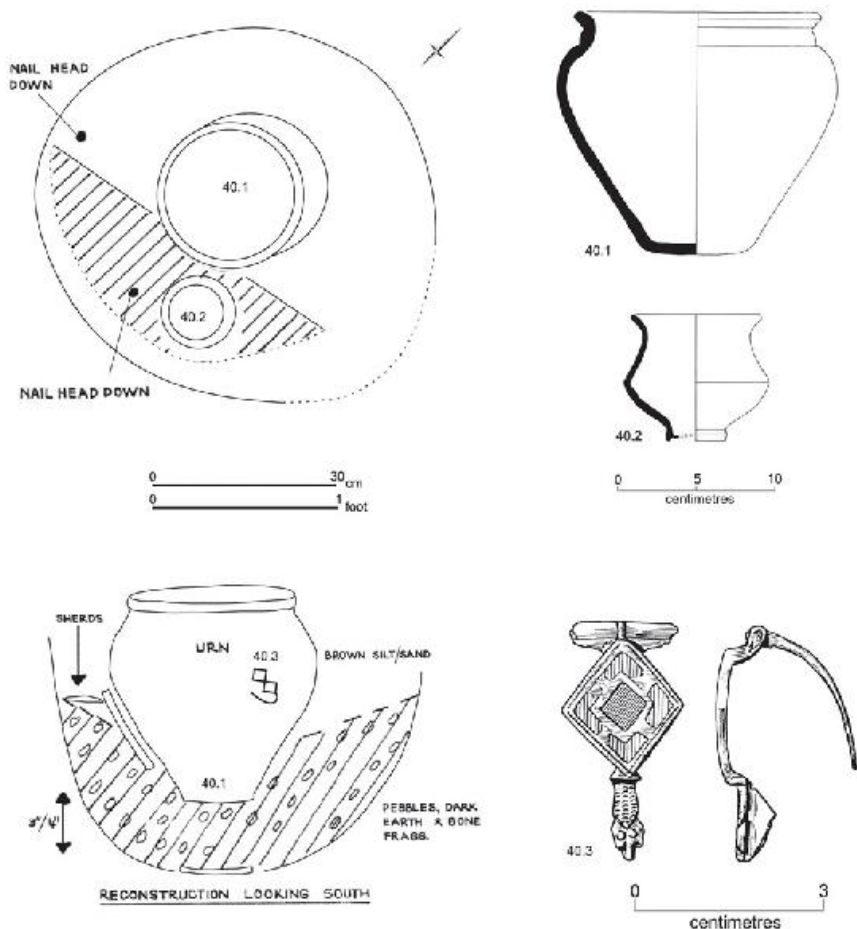


Figure 4.5. Plan, section and grave-goods from Cremation 40.

Grave goods:

59.1 High shouldered, narrow-necked jar in a brownishgrey fabric (Ht 120mm; Base 58mm; Rim 68mm). Cam 220A or 221; Marsh and Tyers Type II.N. AD 70–150. Rare in London, and at Colchester this form occurs in pre- or early Flavian contexts.

Bone: Good preservation; incomplete burning; white in colour. Scattered across the pit floor. 650g. Max length of fragments, 73mm. Some of the bones appear to have been partially sorted on the grave floor; less cremated material higher up in fill.

Grave 1. (312N/-85E) Adult Male (Fig. 4.7)

NB 5.43

Grave pit: Parallel-sided, with rounded corners, orientated ESE–WNW.

2.43 × 0.76 × 0.73m deep. Cuts two pits, one of which was clay-lined.

Pit fill: General fill, very fine grey, ash-like, with some charcoal; some redeposited clay; one residual IA sherd.

Grave furniture: Black stain of nailed oak coffin, 1.95 × 0.56 × 0.23m. Thirty-two nails were recorded from the grave; six nails suggested not to be connected with coffin, but with an object outside the coffin on the right.

Grave-goods:

1.1 Flask, GRY fabric, complete; slightly hooked rim with double grooves at base of neck and on shoulder; burnishing to max girth of the shoulder (Ht 136mm; Rim 49mm; Base 33mm; EVE 1.0). Mucking kiln product type (KA01) (Jones & Rodwell 1973 fig. 9.89, type 'O' said to be made in Kilns II, IV and V). AD 110/20–200/10. Seen at Broomhey Farm, Cooling, Kent and occurs as kiln waste at Chadwell St Mary, Linford, Dartford and Southwark. Placed within coffin by right foot.

1.2 [Not illus] Cluster of five hobnails; these suggest that 'sandals must have been put on top of the coffin', as they were 'above the knees'. One hobnail found separately.

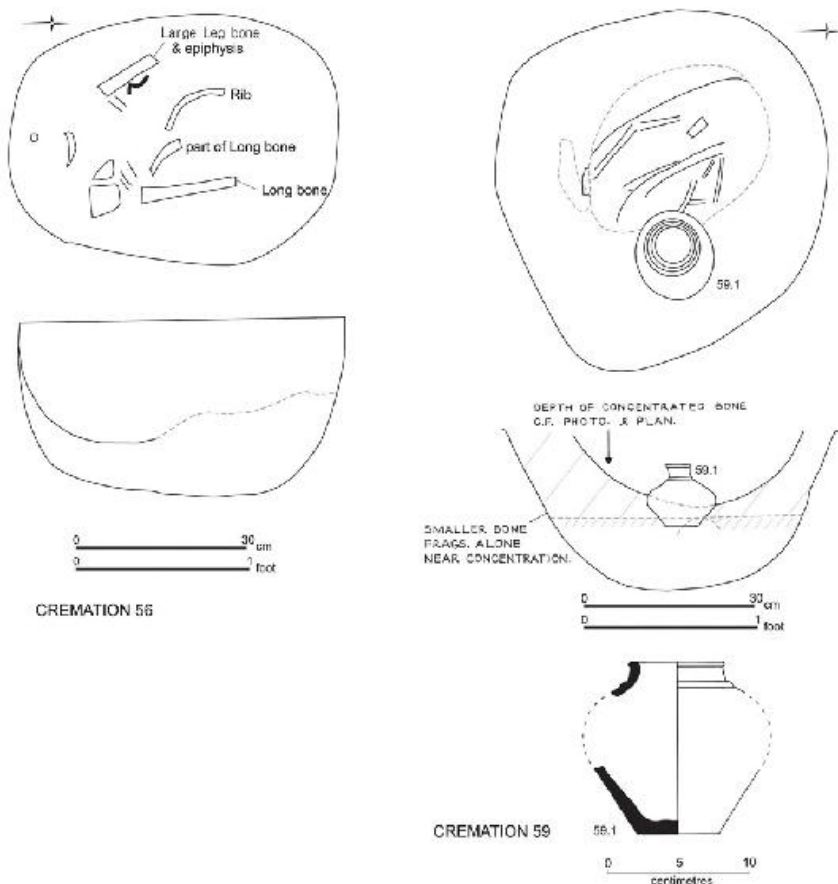


Figure 4.6. Plans, sections and grave-goods from Cremations 56 and 59.

1.3 [Not illus] “There appears to have been something on the right hand side of the grave, between the edge and the coffin. The nails do not appear to have had anything to do with the coffin’.

1.4 [Not illus] A dark organic stain by the left lower leg may represent a further decayed grave offering (perhaps a food deposit?).

Bone: Silhouette, although the skull seems to have survived in part. Indicates a supine extended inhumation with head to the southeast.

Grave 2. (312N/-93E) (Fig. 4.7)

NB 7.9

Grave pit: Sub-rectangular, with rounded corners, nearvertical sides and flat base, orientated ESE–WNW. One end cut obliquely (probably overdug). 2.13 × 0.91 × 0.84m deep.

Grave fill: Very clean fill of sand and small gravel.

Grave furniture: Fifteen *in situ* coffin nails noted, plus a further 10 within the grave fill, suggesting a nailed oak coffin measuring c. 1.85 × 0.48m and 0.23m deep; the only area of coffin staining was seen at

the western end of the grave.

Grave-goods: None.

Bone: None surviving and no silhouette.

Grave 3. (297N/-85E) Adult (Figs. 4.7 & 4.25)

NB 6.68

Grave pit: Rectangular, with rounded ends, orientated NNW–SSE. One side slightly bowed out. $2.31 \times 0.79 \times 0.61$ m deep.

Grave fill: Variably coloured humic silt; presence of several very large pebbles in coffin fill may suggest use of packing stones; residual IA sherds and part of an IA triangular loomweight in fill.

Grave furniture: Nailed oak coffin, measuring $1.88 \times 0.61 \times 0.2$ m deep. Some 30 nails recorded; together with staining, this indicated the coffin was wider at the head than the foot (0.44m). A dark brown manganese stain beneath the left leg and left side of the coffin may indicate something else deposited before the coffin was interred.

Grave-goods:

3.1 Colchester colour coated beaker with Pentice rim, with warped base; the body of the pot is reddened on one side typical of a second; cordon on shoulder and rouletting on body (Ht 154mm; Rim 70mm; Base 37mm). AD 150–250. Apparently little used (perhaps acquired deliberately for burial). Placed upright beside left foot inside coffin.

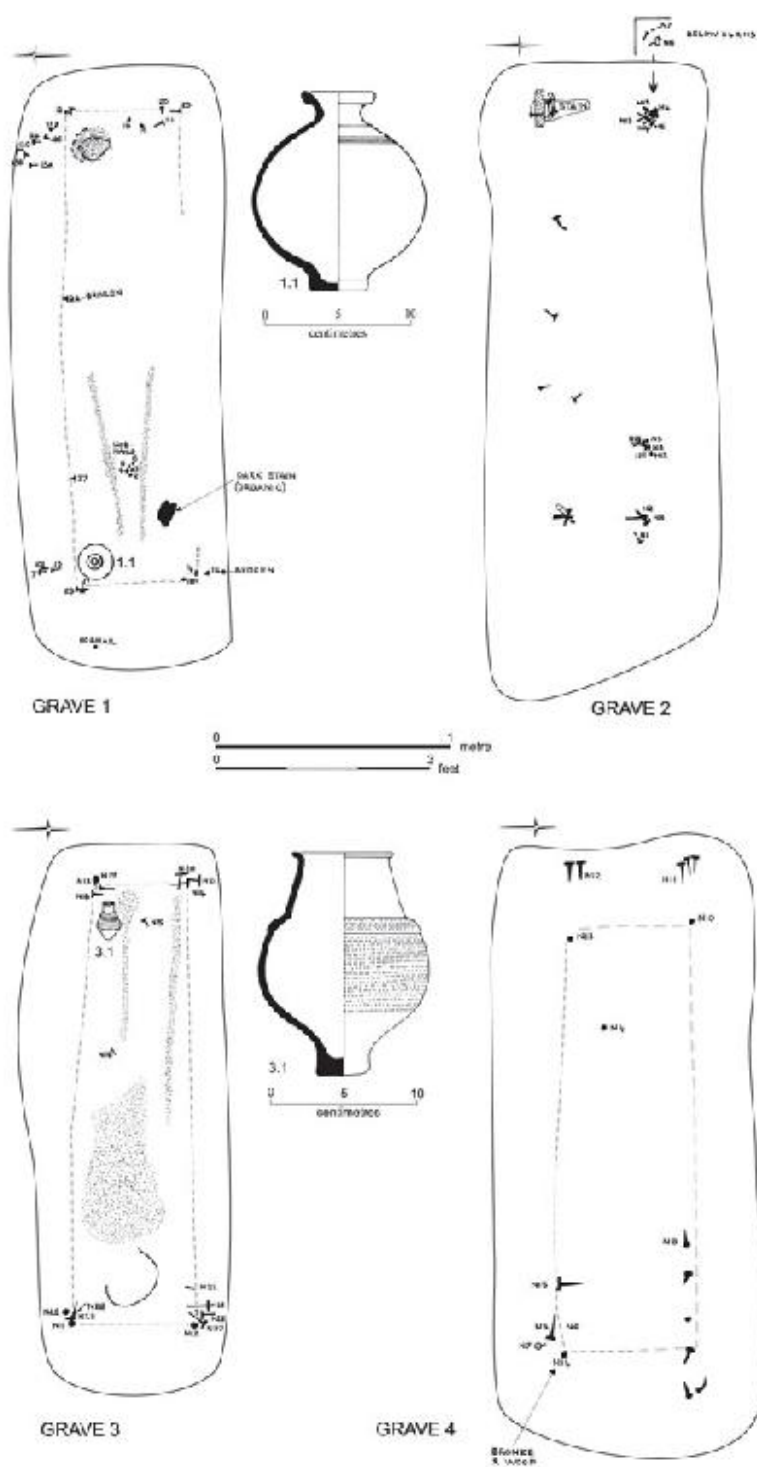


Figure 4.7. Plans and grave-goods from Graves 1, 2, 3 and 4.

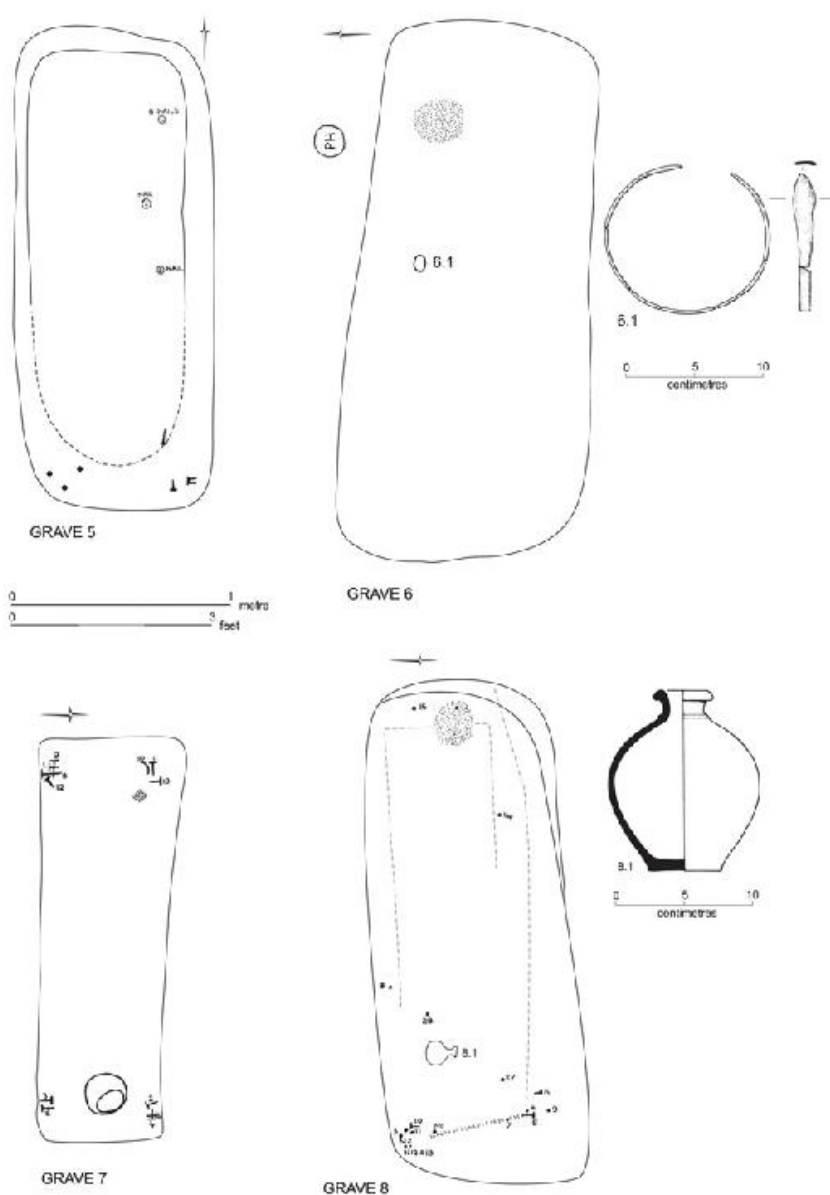


Figure 4.8. Plans and grave-goods from Graves 5, 6, 7 and 8.

Bone: Fragmentary remains of two long-bones and skull, and an extensive ginger silt silhouette, suggest a supine extended burial with head to the SSE end of the grave, looking left.

Grave 4. (292N/-86E) (Fig. 4.7)

NB 7.19

Grave pit: Sub-rectangular, with rounded corners, orientated NW–SE. $2.43 \times 1.07 \times 0.35\text{m}$ deep.

Grave fill: Sandy, with much pea-grit beneath the coffin stain; residual IA and RB sherds.

Grave furniture: Stain of nailed oak coffin (with 16 iron nails recorded, but 19 noted on the plan), $1.98 \times 0.58 \times 0.28\text{m}$ deep. It is of some interest to note that the grave plan shows that clusters of nails occur a short distance away from the ?head end of the coffin. They clearly have been moved in concert, rather than piecemeal as a process of decay and random disturbance such as animal burrowing, and the suggestion could therefore be made that the end of the coffin was wrenched away from the sides when it was still relatively intact.

Grave-goods:

4.1 [Not illu] Bronze fragments (AML No. 65), found outside east end of coffin.

Bone: No evidence of stain or of bone.

Grave 5. (280N/-82E) (Fig. 4.8)

NB 7.11

Grave pit: Sub-rectangular, with rounded corners, sloping sides and rounded base, oriented NE–SW. $2.18 \times 0.91 \times 0.36\text{m}$ deep.

Grave fill: Greyish clay lining containing some charcoal, surrounding greasy black fill containing daub, charcoal and residual IA pottery.

Grave furniture: Clear stain of nailed oak coffin noted, with one markedly bowed end, measuring approximately $1.83 \times 0.61\text{m}$ (depth unknown). Eleven nails recorded, suggesting coffin (although only five small nails and broken shanks seen). At least six end/side nails found ‘in one corner’.

Grave-goods: None.

Bone: No evidence of bones or silhouette.

Grave 6. (257N/-105E) (Fig. 4.8)

NB 5.33; 6.8, 6.58–9

Grave pit: Rectangular, with rounded ends, irregular sides and flattish base, orientated NNW–SSE. $2.44 \times 1.12 \times 0.69\text{m}$ deep. Posthole at the head end of the grave may be a marker. *Grave fill:* Sandy loam with patches of sand and gravel, and many residual prehistoric sherds in top of fill. Handmade base fragment and rim sherd with finger-tip impressions. ?Bronze Age.

Grave furniture: None recorded. No coffin stain noted.

Grave-goods:

6.1 Six refitting fragments of a copper alloy snakes-head bracelet (AML No. 650112) recovered where the right arm might have been

expected. Possessing a 'D'-shaped crosssection, the terminals measure 8mm and 9mm at their widest points, with the bracelet narrowing to 4mm. Internal Diam. c. 60mm, Th. 1.5mm, Wt 5g. The fragments are similar in appearance, all having been subject to a sufficiently high temperature to produce a friable and flaky surface. There is no evidence of the terminals being decorated. Snakeshead bracelets are common objects dating from the mid second–fourth century AD, but are mainly of later Roman date when found in Romano-British grave and cremation contexts (Cool 2000).

Bone: Most of head silhouette, and part of the abdominal region; head to the SSE, facing up. The ginger-brown stained sand silhouette lay directly on the base of the grave. The grave-goods were taken by the excavator to suggest that the inhumation was that of a female, but there is no skeletal evidence for this.

Grave 7. (264N/-105E) Adult (Fig. 4.8)

Grave pit: Rectangular, with markedly squared-off ends; vertical sides rounding to a flat base; orientated SSE–NNW. $1.83 \times 0.61\text{m}$ and 0.46m deep.

Grave fill: Loam, with much dark brown compact silt at the north end, leading to the suggestion that ?turves had fallen into the grave.

Grave furniture: Nailed coffin, measuring $1.6 \times 0.53 \times 0.26\text{m}$ deep. Thirteen nails found at corners only (no wood identification). A coffin stain may have been indicated by siltier soil along the edges of the grave; the top of the grave had been removed by the dragline, but the lid of the coffin was apparently observed as a soil mark.

Grave-goods: None.

Bone: Survival was poor, with a stain and some survival only of the head, which was at the E end, facing up, and perhaps the right foot.

Grave 8. (273N/-102E) (Fig. 4.8)

NB 6.59

Grave pit: Sub-rectangular, with rounded corners, orientated NW–SE. $2.26 \times 0.91\text{m}$, $0.26\text{m} +$ deep. Grave cuts two charcoal-filled pits.

Grave fill: Unstated; some residual IA and RB sherds.

Grave furniture: Nailed coffin of poplar (at least 18 nails), measuring $1.83 \times 0.46 \times 0.26\text{m}$ deep. The NW end of the coffin appears to have decayed outwards, as the headstain lay over the lower coffin stain.

Grave-goods:

8.1 Flask in GRY fabric. Dark grey. Slight cordon on the shoulder; burnishing to below maximum girth then bands of burnishing to the base. The base has wire cutting marks (Ht 134mm; Rim 42mm; Base 5.3mm). Mucking kiln product (KA01). AD 110/20–200/10. This type is also made at Broomhey Farm, Kent. Placed on the right side of the body by its foot inside coffin, lying on its side.

Bone: Head stains only, suggesting head to NW, facing up.

Grave 9. (283N/-95E) (Fig. 4.9)

NB 6.65

Grave pit: Rectangular, slightly tapering with rounded corners, orientated ESE–WNW. $2.59 \times 0.91 \times 0.58$ m deep.

Grave fill: Clean orange sand inside coffin; residual IA and RB finds including many sherds, fragment of IA triangular loomweight, millstone grit fragment and spindle whorl fragment.

Grave furniture: Nailed coffin, measuring $2.19 \times 0.53 \times 0.26$ m deep, with 30 coffin nails. Parts of the sides of the wooden coffin were preserved as knots and sections of upstanding preserved timber, leading to the suggestion that it was constructed from yew, although the wood remains unidentified. Eight ‘woodknots’ are best interpreted as wooden dowels, indicating that the coffin was of nailed and dowelled construction. The presence of both nails and dowels may suggest the re-use of salvaged timber to make the coffin.

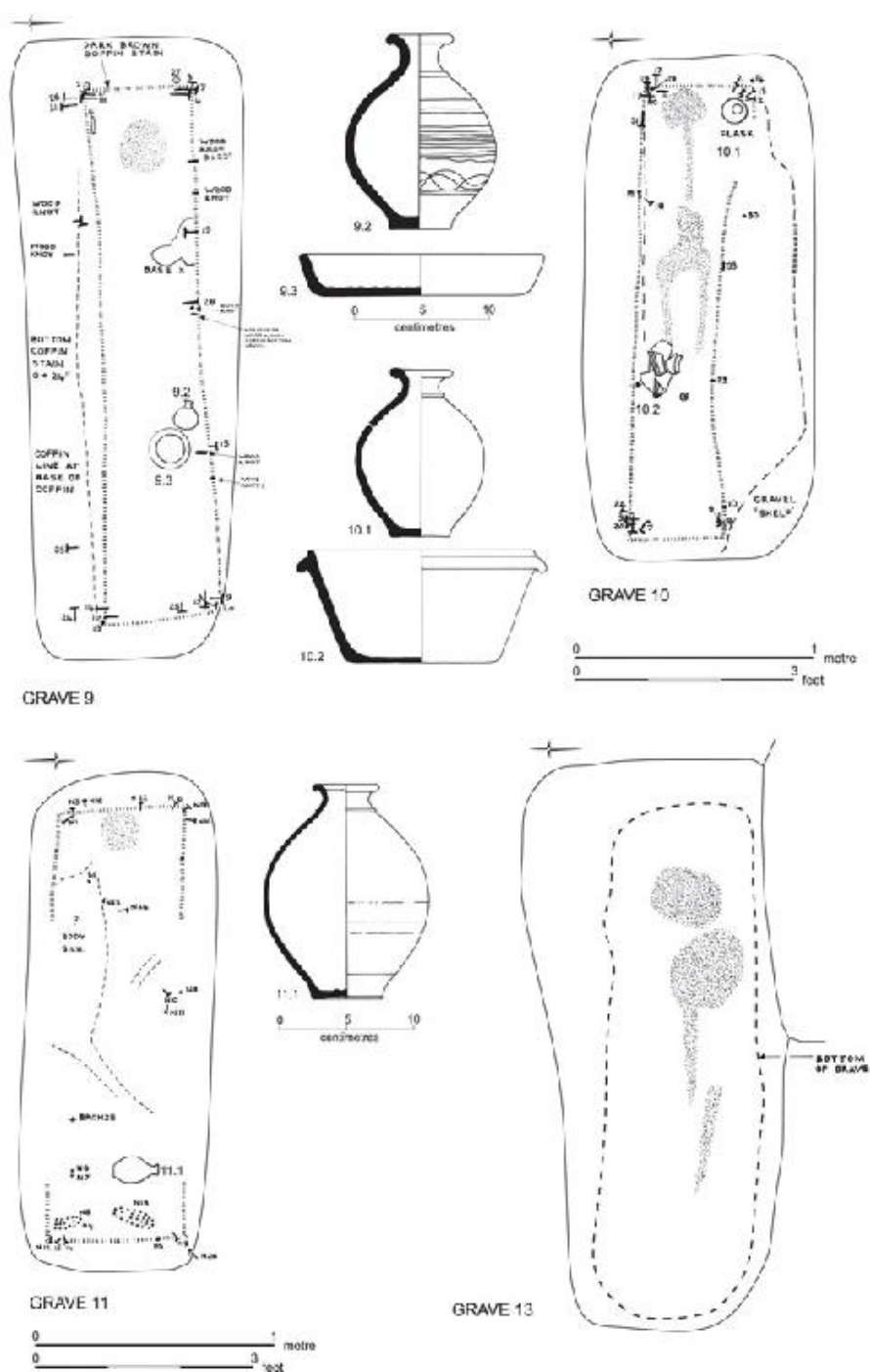


Figure 4.9. Plans and grave-goods from Graves 9, 10, 11 and 13.

Grave-goods:

9.1 [Not illus] Upper cluster of 28 hobnails, and lower cluster of 40 hobnails, both with leather attached, observed about 0.3m from the end of the coffin, by the right leg, or possibly on the feet, points up.

9.2 Hooked rim flask in GRY fabric with black slip (Ht 145mm; Rim 50mm; Base 4.7mm). Burnished zone on upper body and wavy line burnish on lower body. Single cordon below neck. Mucking kiln product (KA01). AD 110/20-200/10. Placed inside the coffin by the left knee.

9.3 Dish with plain rim in GRY fabric (Ht 30mm; Rim 180mm; Base 145mm). Simple 'pie dish'. Monaghan Type 5E1.1. AD 130/60-260. Placed by the left knee.

9.4 [Not illus] One item (Nail No. 8, found outside the coffin to the east of the head) assumed to be a coffin nail was identified as having preserved leather attached, and may have been a knife handle, or perhaps a form of coffin fitting. This comprised a round-sectioned tang with an eight-sided organic handle in two fragments (L. 28mm; Diam. 14mm). *Bone*: Patch of ginger soil marks a head stain at east end of grave, head facing up; estimated height of body (measured from head to hobnails) 1.60m, presumably indicating an adult.

Grave 10. (288N/-100E) Adult (Fig. 4.9)

NB 5.33, 6.66

Grave pit: Rectangular, with rounded corners and slightly bowed sides, orientated ESE-WNW. $2.13 \times 0.91 \times 0.61$ m deep. A gravel 'shelf' was observed running down the north side of the grave.

Grave fill: Very clean dark brown silt outside coffin with residual IA and RB sherds; brown sandy fill inside coffin.

Grave furniture: Stain of nailed oak coffin measuring $1.90 \times 0.46 \times 0.23$ m deep, with bowed left side; 33 iron coffin nails recorded.

Grave-goods:

10.1 Flask with hooked rim in GRY fabric. There is a cordon on the shoulder. It is noted that there was an indentation on the body of the pot, which would suggest that this was a second. The pot is missing and there are no measurements available. Mucking product (KA01). AD 110/20-200/10. Placed (slightly tilted) in the coffin at the northeast corner;

10.2 Flanged bowl in GRY fabric (Ht 84mm; Rim 172mm; Base 114mm; EVE 1.0). Mucking product (RC15). Cam 305. AD 200/40-320/50. Placed on the right side of the body, by the right leg, and was apparently already broken when placed in the grave.

Bone: Body supine and extended with head to east, facing up. Silhouette shows spine, pelvis and legs. Damaged crown of tooth, probably upper premolar; enamel only. No dentine survives.

Grave 11. (295N/-100E) (Fig. 4.9)

NB 5.16, 7.57

Grave pit: Rectangular, with slightly bowed sides and rounded corners, orientated WNW–ESE. $1.98 \times 0.73 \times 0.53\text{m}$ deep. Cuts LBA–EIA pit 298N/-95E at E end.

Grave fill: Brownish loam and gravel, with residual LBA– EIA sherds; grave floor was very hard sand. Phosphate readings were conducted over this grave by Proctor and Gamble on 30th November 1965, giving a reading of 60% at the centre right of the grave and 73% over the centre left.

Grave furniture: Nailed oak coffin, measuring $1.83 \times 0.5 \times 0.3\text{m}$ deep, represented by 20 iron nails and partial coffin stain.

Grave-goods:

11.1 Narrow-necked jar in GRY fabric. There is a single cordon at the base of the neck and bands of burnishing on the shoulder, maximum girth and at the base (Ht 150mm; Rim 50mm; Base 51mm; EVE 0.5). Mucking product (KA01). AD 110/20–200/10. It lay on its side within the coffin between the knees and feet.

11.2 [Not illus] At the E end of the coffin there was a group of 20 hobnails. The soil close to them was more clayey and greasy in texture and greyish in colour, and was presumably the traces of the decayed leather. Close by and slightly deeper, a further group of nails was found, still largely *in situ*. These also were surrounded by greyish earth. These sandals may have been worn at burial, or placed in the grave (63 hobnails in total, including groups of 5, 18 and 34). Also a fragment of bronze near the right knee.

Bone: Head stain and partial body stain suggest that the head lay to the west, and that the body lay slightly flexed on its left side; this was possibly to fit into the restricted space within the coffin.

Grave 13. (303N/-107E) (Fig. 4.9)

NB 5.45

Grave pit: Slightly tapering grave with rounded corners, variable to vertical sides and flat base, orientated NW–SE. $2.31 \times 1.02 \times 0.41\text{m}$ deep.

Grave fill: Darkish silt. Some ?charcoal flecks noted in upper fill and some residual IA pottery and worked flint.

Grave furniture: None observed. No coffin stain seen.

Grave-goods: None.

Bone: None preserved. Probably sandy brown body silhouette noted, with head apparently at the SSE end, facing up, but body position unclear.

Grave 14. (322N/-138E) (Fig. 4.10)

NB 5.41, 6.41

Grave pit: Rectangular grave with rounded corners, orientated WNW–

ESE. $2.0 \times 0.66 \times 0.4$ m deep.

Grave fill: A dirty gravel fill inside the coffin; a stain outside the coffin at the foot-end of the grave may be redeposited turf; residual IA sherds. Ground frozen during excavation, so grave was picked.

Grave furniture: Clear stain of nailed oak coffin, with at least six iron nails, measuring 1.73×0.61 m, depth uncertain. Most of the coffin nails were upright, serving to nail the bottom to the sides.

Grave-goods:

14.1 [Not illus] Colour coated beaker: The rim is warped and part broken. The slip is dark brown on orange fabric. The body of the pot is decorated with white barbotine scrolls with a band of dots above. There are two bands of rouletting on the body. The warped rim indicates a second (Ht 190mm; Rim 53mm; Base 45mm; EVE 0.5). AD 150+. The pot lay inside the coffin on its side near the foot of the grave, and was empty except for a little sand. This vessel was lost before 1978, and cannot now be illustrated or its fabric described.

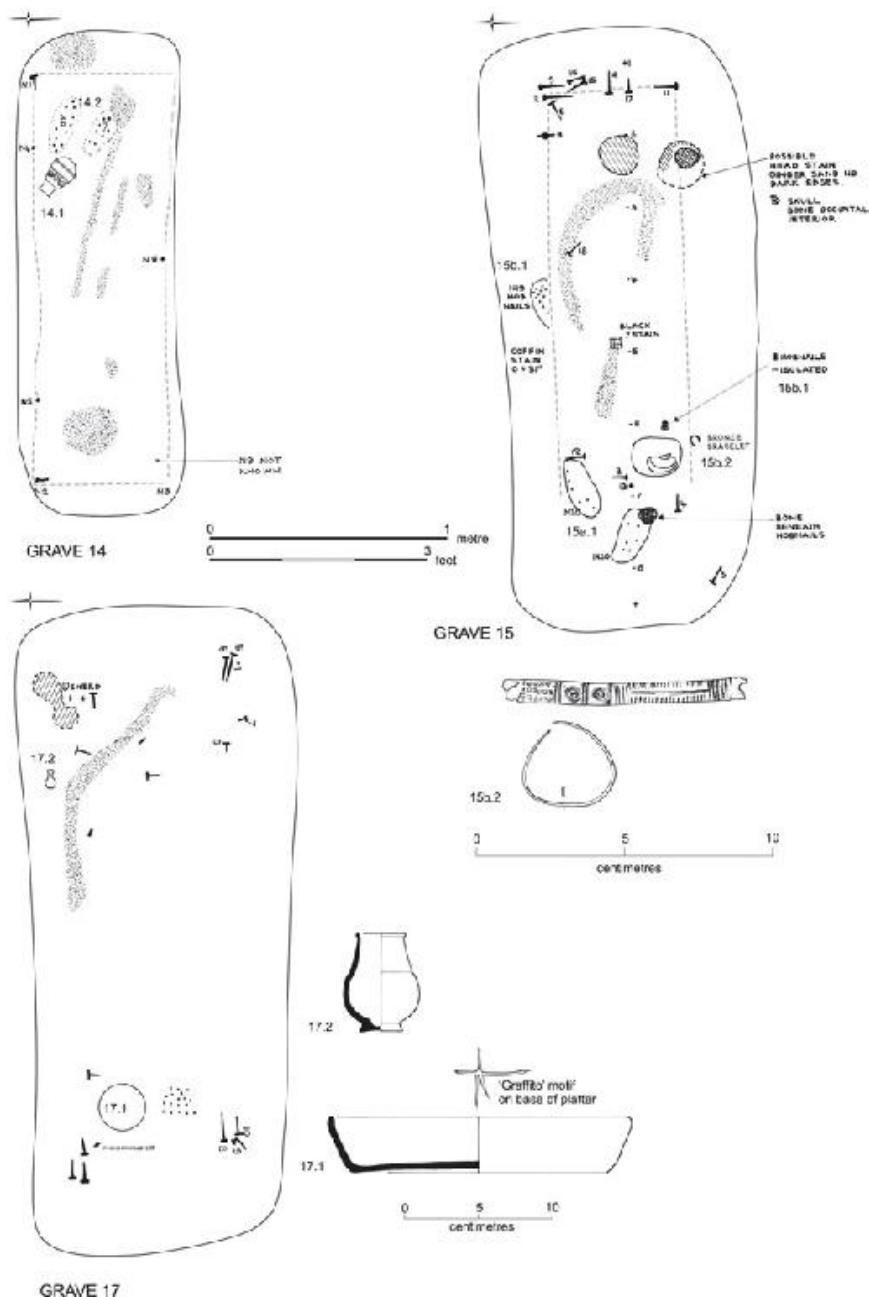


Figure 4.10. Plans and grave-goods from Graves 14, 15a/b and 17.

14.2 [Not illus] Two clear clusters of hobnails close to the left leg. They were clearly not on the feet of the body (52 in total; 33 at the left foot and 19 at the right). Most of the hobnails lay on their sides

(perhaps indicating that the shoes were deposited in this manner) and there were more nails with the left than the right.

Bone: Head stain and partial body silhouette of compact ginger brown sand indicates that body was supine and extended, with the head to the west end of the grave, facing up.

Grave 15a and b. (327N/-147E) (a) Adult; (b) Adult (Fig.4.10)

NB 6.25-6, 17.186

Grave 15a

Grave pit: Large, with roughly parallel sides and rounded corners, near-vertical sides and a flat base, orientated ESE– WNW. $2.51 \times 1.07 \times 0.79\text{m}$ deep. Cuts MIA structure PG16 and disturbed Grave 15b.

Grave fill: Mixed sand and gravel fill; residual IA sherds.

Grave furniture: Nailed oak coffin, with stain indicating dimensions of $1.78 \times 0.53\text{m}$, depth uncertain. At least 20 iron nails recovered (only nine were examined).

Grave-goods:

15a.1. [Not illus] Set of iron hobnails, two groups put together totalling 40, probably a pair of hobnailed shoes. *Bone:* Good head stain and poor ginger brown sand body silhouette indicating a supine extended burial with head to the east, facing up.

Grave 15b

Grave pit: No data: disturbed by Grave 15a, but over 0.81m deep, as coffin/?body stain of brown sand observed at this level.

Grave fill: No data.

Grave furniture: Part of a coffin stain underneath Grave 15a at a depth of 0.81m.

Grave-goods:

15b.1. [Not illus] Discrete group of iron hobnails, cut through by the right side of Grave 15a coffin, plus another isolated group under coffin of Grave 15a.

15b.2. Copper alloy bangle found just outside the coffin of Grave 15a; disturbed (AML No. 370; No. 65/8). Ribbon strip bracelet with line, dot and stamp decoration. Flat rectangular cross-section. A broken adult-sized bracelet made to fit a small child. Lydney decoration Type H, typically fourth-century AD.

Bone: Head stains and disturbed skull bone found in two places: near the left shoulder and under the left foot of Grave 15a, comprising fragments of cranium, occipital interior and part of mastoid process.

Grave 17. (280N/-105E) (Fig. 4.10)

NB 5.17, 5.25, 7.17–9

Grave pit: Rectangular with rounded corners, sloping sides and flat

base, orientated WNW–ESE. $2.74 \times 1.22 \times 0.61\text{m}$ deep.

Grave fill: Mixed loam and gravel as infill after coffin collapse; grave fill itself is loam over brown sandy loam. Flint and sherd recorded from fill and cremated bone recorded in top 0.08m of grave fill at SE corner; did this burial destroy an earlier cremation?

Grave furniture: Poor stain of nailed oak coffin; location of twelve iron nails gives approximate dimensions of $1.98 \times 0.66\text{m}$ (depth uncertain).

Grave-goods:

17.1 Dish, plain rim in GRY2 fabric. Burnished. The vessel is worn/abraded. There is a graffito on the base, scratched post-firing (Ht 42mm; Rim 203mm; Base 174mm; EVE 1.0). Mucking product (RB03). AD 110/20–250/300. Filled with roots and sand, and placed within the coffin at the northwest corner of the grave.

17.2 Miniature long-necked globular beaker in LNA fabric. Burnished on the shoulder. Wire cut marks on the base; slightly distorted – a possible second (Ht 66mm; Rim 33mm; Base 28mm). A similar beaker is from Broomhey Farm, Kent (Monaghan 1987, class 2C6.4). AD 200–300+ (although LNA fabric is normally earlier at Mucking). Found in slanting position in grave outside the coffin at the head end of the grave, filled with sand.

17.3 [Not illus] Fifty-five iron hobnails. Some loose, others in a pattern (with points up, suggestive of a shoe placed sole downwards) towards W. end of the grave at a depth of 0.56m.

Bone: Silhouette, dark earth soil mark in sand at a depth of 0.56m; position of hobnails suggests body lay with head to east.

Grave 18. (290N/-115E) Adult Female 18a Child (Infans) (Fig. 4.13)

Grave pit: Rectangular, with rounded corners, truncated at the head end by the enclosure of Grave 19. Dimensions: 2.29×0.91 and 0.46m deep, oriented N–S.

Grave fill: Not certain but probably sandy loam; residual RB sherds.

Grave furniture: Stain of nailed ?poplar coffin, with at least 14 iron nails; dimensions: 2.01m long, 0.51m wide, depth unknown.

Grave-goods:

18.1 Circular twisted expanding fastening bracelet or armlet (AML No. 14; No. 65/10), found on the left leg (anklet?); each twist has three turns. With a circular cross-section, 2mm wide, and an internal diameter of 86mm, the bracelet weighs 10g. Identical examples have been recovered from Colchester and Lankhills cemetery, Winchester, the former dating from the third to fourth century AD (Crummy 1983, no. 1601) and that from Lankhills, between AD 310 and 410 (Clarke 1979, 120; graves G239, G323).

18.2 Two refitting fragments forming a complete snakeshead bracelet

(AML No. 385; No. 65/9). Placed on right side near the hip (?on arm), the bracelet has a 'D'-shaped crosssection, 4mm thick and 4mm wide and weighs 18g. Both terminals are decorated with incised circles and grooves to represent a snake's head, eyes and snout. Dated to the third-fourth century AD.

Bone: Traces of head stain and a few teeth; corrosion products from bangle 18.1 preserved adjacent section of leg bone (?tibia); together these indicate a supine extended burial with head to the north, facing up. Also reported from this grave were "Very frail scraps of either dental enamel or snail shell. (If human, may be infant)".

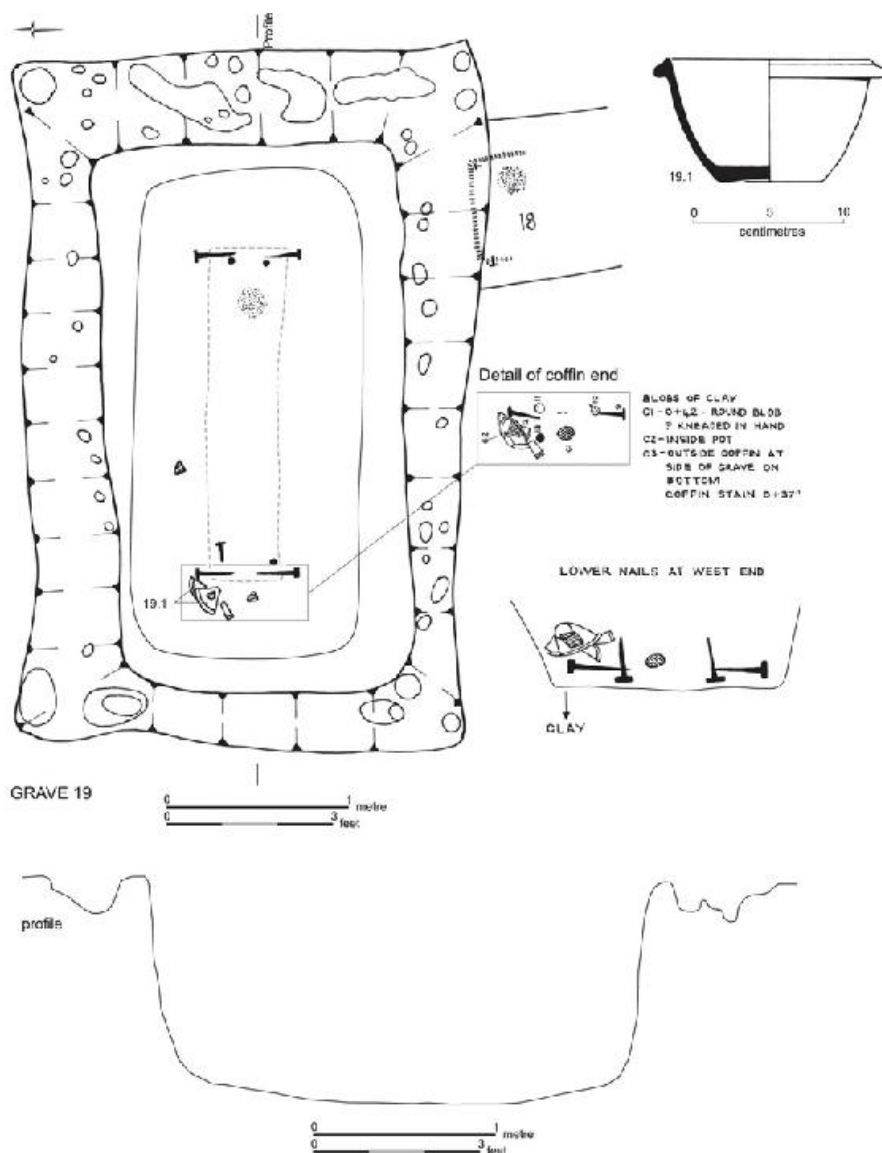


Figure 4.11. Plan, sections and grave-goods from Grave 19.

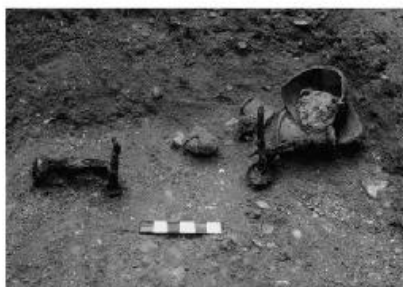
Grave 19. (293N/-123E) Adult (Fig. 4.11–12)

NB 5.27, 6.53

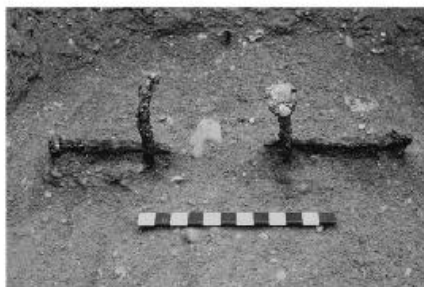
Grave pit and surround: Rectangular grave with rounded corners, near-vertical sides and flat base, orientated ESE– WNW. $2.74 \times 1.27 \times 1.22\text{m}$ deep. The surrounding ditch was c. $0.3\text{--}0.46\text{m}$ in width, measuring $3.8 \times 2.9\text{m}$ overall with straight sides to cut. It had no opening. The bottom of the ditch was irregular and was pitted with stake- and other holes. It seems likely that these are the rootings of an ornamental hedge. This feature cut the head of Grave 18 (see above).

Grave fill: Gravel and loam; some residual IA and RB sherds in upper fill.

Grave furniture: Clear stain of a nailed coffin, c. $1.88 \times 0.46 \times 0.3\text{m}$ deep. The coffin nails (of which there were stated to be 20) included some which were exceptionally large, up to 0.23m in length. The wood grain impressions suggest that some may have been driven only part-way into the coffin (but this may have been due to differential preservation; see Mould below). The larger nails were found at the upper part of the coffin, the smaller ones at the bottom. The position of the nails suggests that the coffin sides were lap-jointed to the bottom of the coffin, while the end was butt-jointed to the bottom board.



FINDS AT
WESTERN END



FINDS AT
EASTERN END

Figure 4.12. Photographs of Grave 19.

Grave-goods:

19.1 Flanged bowl in GRY2 fabric. Iron stain on the vessel (Ht 80mm; Rim 145mm; Base 74mm). Mucking Kiln product (RC15). AD 200/40–

320/50. Found broken against the right foot of the coffin, and outside it.

19.2 [Not illus] Inside, and close to the bowl were two 'heart-shaped' pieces of unfired clay, while a third similar object was found mid-way along the right side of the coffin. These were not kept and it is impossible to state what they might have been.

19.3 [Not illus] Two hobnails (location uncertain).

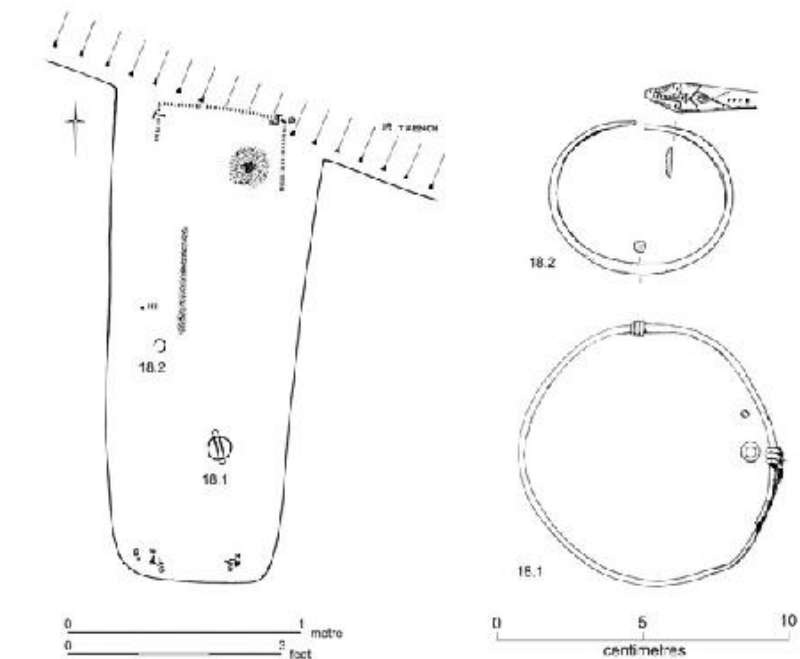
19.4 [Not illus] Round-section pin articulating with a fragment of round-section ring; probably a buckle or brooch. Location uncertain.

Bone: Poor silhouette showing only the head stain, indicating that the body lay with head to the east, facing up.

Grave 21. (352N/-126E) (Fig. 4.13)

NB 5.26

Grave pit: Slightly tapered towards foot-end, with rounded head end and rounded corners to foot-end, sloping sides and flat base, orientated ESE–WNW. $2.20 \times 0.91 \times 0.46\text{m}$.



GRAVE 18

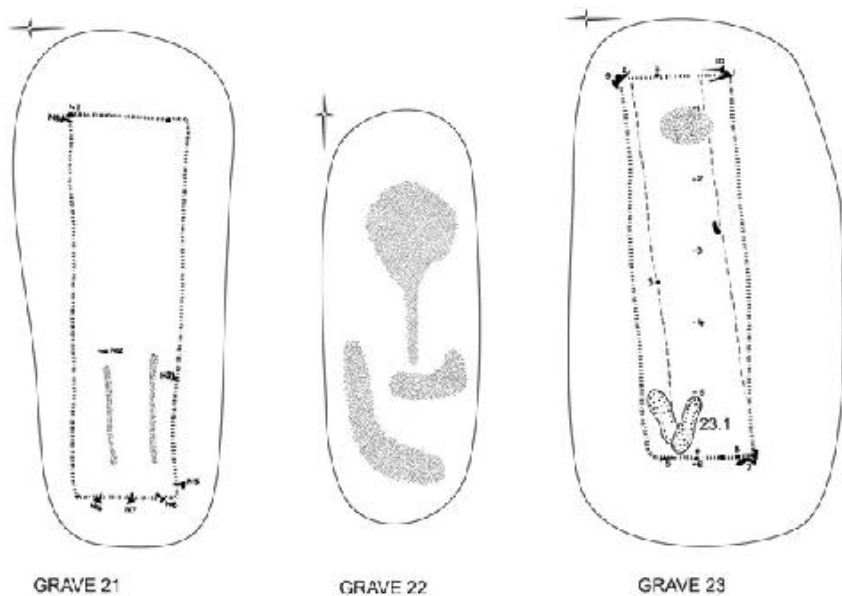


Figure 4.13. Plans and grave-goods from Graves 18, 21, 22 and 23.

Grave fill: Gravelly fill with areas of greyish brown sand or silt.
Grave furniture: Clear greyish silt stain of nailed oak coffin, 'of bowl-

shaped section', measuring $1.7 \times 0.51 \times 0.2\text{m}$ deep. Ten nails recorded.

Grave-goods: None recorded.

Bone: Poor silhouette of legs only, but indicate that body extended and supine, with head to the east.

Grave 22. (356N/-117E) (Fig. 4.13)

NB 5.40a; 6.33

Grave pit: Straight-sided, with rounded ends. $1.78 \times 0.61\text{m}$ and 0.33m deep.

Pit fill: Unstated; top picked as grave frozen.

Grave furniture: None observed. No coffin stain or nails noted.

Grave-goods: None.

Bone: Stain only, showing individual was placed in the grave on the left side, in a flexed position.

Grave 23. (333N/-115E) (Fig. 4.13)

NB 5.36

Grave pit: Elongated oval grave, orientated ESE–WNW, very deep. $2.21 \times 1.22 \times 1.22\text{m}$ deep.

Grave fill: Clean gravel outside coffin, but dirty gravel within coffin; residual IA sherds.

Grave furniture: Clear dark brown/black sand stain of nailed oak coffin (10 iron nails recovered) measuring $1.66 \times 0.48 \times 0.2\text{m}$ deep.

Grave-goods:

23.1 [Not illus] Hobnails within clear greyish gravel stains of two sandals (lengths of 0.23m and 0.26m) placed upside down in the grave, probably within the coffin (55 in total). *Bone:* Head stain only; narrowness of coffin suggests a supine extended burial with head to the southeast, facing up.

Grave 24. (250N/-116E) (Fig. 4.14)

NB 5.32, 5.47

Grave pit: Rectangular, rounded corners and slightly irregular sides, orientated SSW–NNE. $2.13 \times 1.01 \times 0.61\text{m}$ deep.

Grave fill: Mixed loam and gravel. Residual sherds of IA and RB pottery noted in fill.

Grave furniture: Heavy staining of nailed oak coffin, with up to 54 nails in clear pattern, measuring $1.83 \times 0.61 \times 0.5\text{m}$. At the base of the grave the coffin stain extended across the bottom of the grave.

Grave goods: None noted.

Bone: Body stain not seen due to heavy coffin staining.

Grave 28. (345N/-140E) (Figs. 4.14, 4.22 & 4.25)

NB 5.34, 5.36–8

Grave pit: Rectangular grave with rounded corners, steeply sloping sides and flat base, orientated ENE–WSW. $2.13 \times 0.86 \times 0.61$ m deep. Grave post-dates Graves 57, 58 and 62. *Grave fill:* Not noted; residual IA and RB sherds.

Grave furniture: At least 57 iron coffin nails, and a clear (in parts) coffin stain indicate a nailed oak coffin measuring 1.22×0.38 m (depth uncertain). An iron ring-headed pin (L. 70mm; head W. 25mm) was also present.

Grave-goods: Sherds of small orange/red Much Hadham type jar from this grave (part also found in Grave 58, where it may have originally been deposited).

28.1 Small jar in MH fabric. The vessel has alternate bands of burnishing/plain on the shoulder and body, divided by shallow grooves (Ht 110mm; Rim 95mm; Base 51mm; EVE 0.7). Part of the rim is recorded as being found in Grave 58. This may be a Much Hadham product. AD 250+.

28.2 [Not illus] Eighty-one hobnails were recorded from the grave, but their positions were not noted.

Bone: Not noted; cremated bone (47g, Adult) was reported from this grave, perhaps indicating a disturbed cremation.

Remarks: Part of 57 group (Graves 28, 57, 58, 61 & 62). Size of coffin suggests child.

Grave 29. (325N/-125E) (Figs. 4.14 & 4.25)

NB 5.22, 5.41

Grave pit: Sub-rectangular, with rounded corners, orientated WNW–ESE, but grave floor slopes from E to W. $1.98 \times 0.91 \times 0.81$ m deep.

Grave fill: Iron pan found in floor; otherwise not stated.

Grave furniture: Clear stain of nailed oak coffin; $1.52 \times 0.4 \times 0.23$ m deep. The coffin was broader at the head than the foot. Eighteen nails were found.

Grave-goods:

29.1 Flask in GRYS fabric. There is a small cordon at the base of the neck. The pot is burnished from the rim to just above the maximum girth (Ht 134mm; Rim 44mm; Base 62mm; EVE 1.0). The vessel is a second. The pot was damaged by an indentation before firing, which would have weakened the body, rendering it of little use for its intended purpose. Mucking product (KA01). AD 110/20–200/10. Vessel was placed upright in bottom left corner of coffin.

Bone: No silhouette or head stain noted. Tapering of coffin and placing of the vessel might indicate an extended burial with head to the ESE.

Grave 30. (292N/-142E) Adult (Fig. 4.15)

NB 5.18

Grave pit: Rectangular, with rounded sides and ends, orientated SE–

NW. $2.43 \times 1.37 \times 0.91$ m deep. The west end of the burial was under an uncleared area, and cuts Grave 47, and the grave itself was possibly disturbed.

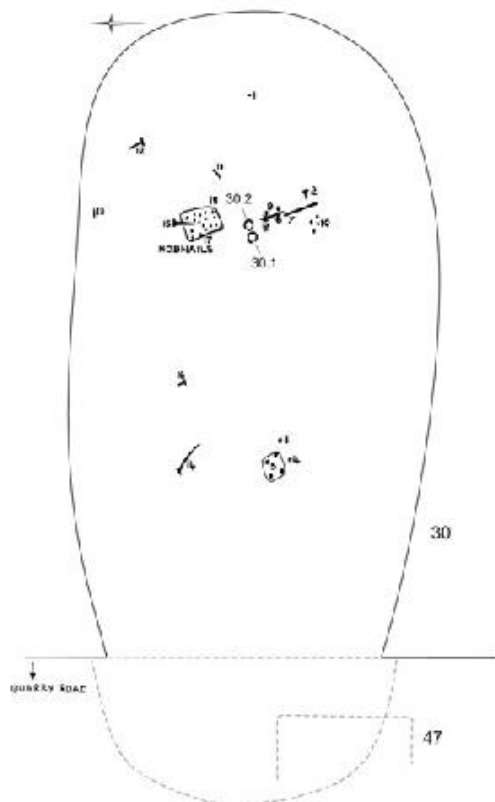
Grave fill: Generally mixed loam and gravel, with much humus; residual RB sherds.

Grave furniture: Sixteen nails were found, but these did not give the size and shape of the coffin. Replaced wood on the nails identified as oak.

Grave-goods: Both bracelets found near the larger group of hobnails at the ?foot-end of the grave.

30.1 Bracelet (AML No. 654). Small narrow, rectangular cross-sectioned bracelet or armlet decorated with five circular impressions, with the central two between transverse grooves. The 'upper' three are connected by diagonal bands. Two notches, 3.5mm from the end, create a rounded appearance to the terminal. The 'lower' half is separated by two transverse bands and decorated with a mid-line groove with evenly spaced small notches either side. The surface of the armlet is pitted. Internal Diam. 35mm, W. 4.5mm, Th. 1.5mm, Wt 2g. Such multiple motif bracelets are increasingly seen as dating to the second half of the fourth century AD (E. Swift pers. comm.).

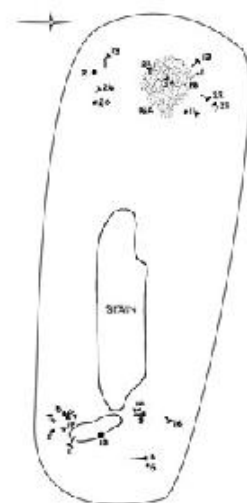
30.2 Bracelet (AML No. 655). Small narrow, rectangular cross-sectioned oval bracelet armlet decorated with circular impression and possible four transverse grooves. The surface of the armlet is heavily pitted, obscuring the decoration. Internal Diam. 42×36 mm, W. 4mm, Th. <1mm, Wt 2g. Both these bracelets are similar in size and form and are more suited to a young child. Comparable examples have been found in the cemeteries at Colchester and Lankhills, Winchester (Clarke 1979; Crummy 1983).



GRAVES 30 AND 47



GRAVE 31



GRAVE 33

Figure 4.15. Plans and grave-goods from Graves 30/47, 31 and 33.

30.3 [Not illus] Forty-three hobnails in total, in two distinct groups and a separate cluster. They had no clear pattern, but lay points up in

the grave. Greyish silty deposit in the vicinity of the clusters is probably decayed leather.

Bone: There was some bone survival in the vicinity of the bracelets only, but its general condition was poor. No bone stain or silhouette was visible. The grave-goods were taken by the excavator to suggest that this was a female burial, but there is no skeletal evidence to support this.

Grave 31. (275N/-142E) (Fig. 4.15)

NB 5.20

Grave pit: Sub-rectangular, with rounded corners, orientated WNW-ESE. $2.43 \times 0.91 \times 0.53\text{m}$ deep.

Grave fill: Mixed loam and gravel.

Grave furniture: Eleven nails were found in the fill, suggesting that the burial was coffined, but no clear dimensions were recovered, and wood was not identified.

Grave-goods:

31.1 [Not illus] Pair of hobnailed sandals found (identified by the stains and a group of eight nails and three others). The cluster had points downwards, suggesting the soles were placed uppermost, and had been positioned at the head end of the burial.

Bone: Poor silhouette of dark brown stained sand; legs only and possibly one foot, indicating a supine extended burial with head to WNW.

Grave 33. (248N/-127E) (Fig. 4.15)

NB 5.21

Grave pit: Rectangular, with rounded ends, vertical sides and flat base, orientated NW-SE. $1.88 \times 0.74 \times 0.38\text{m}$.

Grave fill: Mixed loam and gravel.

Grave furniture: Twenty-four nails were found grouped at both ends, indicating a nailed oak coffin with approximate dimensions $1.60 \times 0.43 \times 0.37\text{m}$ deep.

Grave-goods:

33.1 [Not illus] Single hobnailed sandal (11 nails rusted together, but point upwards where visible), at foot-end of grave, with toe pointing SW; a second sandal (13 hobnails) present at a different level (not shown on plan but described).

Bone: No survival; stain only showing the position of the head and the legs, indicating a burial with head to NNW.

Grave 34. (263N/-128E) (Fig. 4.16)

NB 5.21

Grave pit: Rectangular, with near vertical sides and flat base, orientated ESE-WNW. $2.43 \times 0.79 \times 0.84\text{m}$ deep.

Grave fill: Brownish loam and gravel; some residual IA sherds in fill.

Grave furniture: Clear stain and 32 nails found from nailed oak coffin; apparently tapering; approximately $1.98 \times 0.62\text{m}$ (depth unknown).

Grave-goods:

34.1 Narrow-necked jar in GRYS fabric. There is a slight cordon at the base of the neck. The pot survives from the neck to the maximum girth. There are bands of triple wavy lines and traces of white slip (Ht 120mm; Rim 42mm; Base 45mm; EVE 0.5). The pot has heat-crazing marks on one side of the body; this would suggest that it is a second. Mucking Kiln product (KA01). AD 110/20–200/10. [NB Mistakenly attributed to Grave 24 when published as No. 89 in Jones and Rodwell 1973]. Vessel placed inside the coffin at the left foot (empty when found).

34.2 [Not illus] Hobnails from pair of sandals at the foot of the coffin; points up; placed in grave (37 in total).

Bone: Poor survival; partial silhouette only, suggesting that the body lay with head to WSW, facing left.

Grave 35. (275N/-127E) Adult (Fig. 4.16)

NB 5.24, 5.28

Grave pit: Irregularly rectangular with rounded corners, orientated SE–NW. $2.29 \times 1.22 \times 0.56\text{m}$ deep.

Grave fill: Generally brownish loam and gravel; some residual RB sherds in fill.

Grave furniture: No coffin stain noted, but sixteen coffin nails (?*in situ*) give approximate dimensions of $1.96 \times 0.61 \times 0.38\text{m}$ deep. Replaced wood on nails identified as oak.

Grave-goods: None.

Bone: No silhouette, but some bone survival including part of a leg. Poor condition, but position of leg suggests head may have lain to SE.

Grave 36. (256N/-112E) (Fig. 4.16)

NB 5.39, 4.22, 6.6, 6.31

Grave pit: Sub-rectangular, with rounded corners, vertical sides and flat base, aligned SSE–NNW. $2.36 \times 1.14 \times 0.86\text{m}$ deep.

Grave fill: Outside coffin grave fill was reddish-black, with more gravelly reddish fill within. Marked dark brown humus linear stain on the top of the grave, possibly sods, or a grave marker of wood noted. Nineteen residual sherds and a flint noted; coin (36.1) must also be residual.

Grave furniture: Clear stain of nailed oak coffin measuring $1.83 \times 0.61 \times 0.48\text{m}$ deep. Thirty-two nails found, mainly clustered at the corners.

Grave-goods:

36.1 [Not illus] Flat-Linear potin. Obverse: head left, with angular

face; Reverse: bull left. Est. Diam. 17mm. Class I, Type F or GB. Later second- to early first-century BC (Haselgrove 2005; Haselgrove and Gruel 2007). Found on right side of burial close to the head, but outside coffin (residual) [coin No. 65/1].

Bone: Clear silhouette of head and limbs. Otherwise no bone survival. Indicates that body was supine and extended, with head to SSE, facing up.

Grave 37. (357N/-134E) (Fig. 4.17)

NB 5.19

Grave pit: Sub-rectangular with rounded corners, orientated ENE–WSW. $1.98 \times 1.4 \times 0.91$ m deep.

Grave fill: Sandy loam and gravel, with some traces of charcoal at all levels. (This may be derived from an earlier patch of charcoal found nearby.)

Grave furniture: No coffin silhouette noted, but six nails were found in the E end of the grave, probably representing a wooden box. Replaced wood identified as oak.

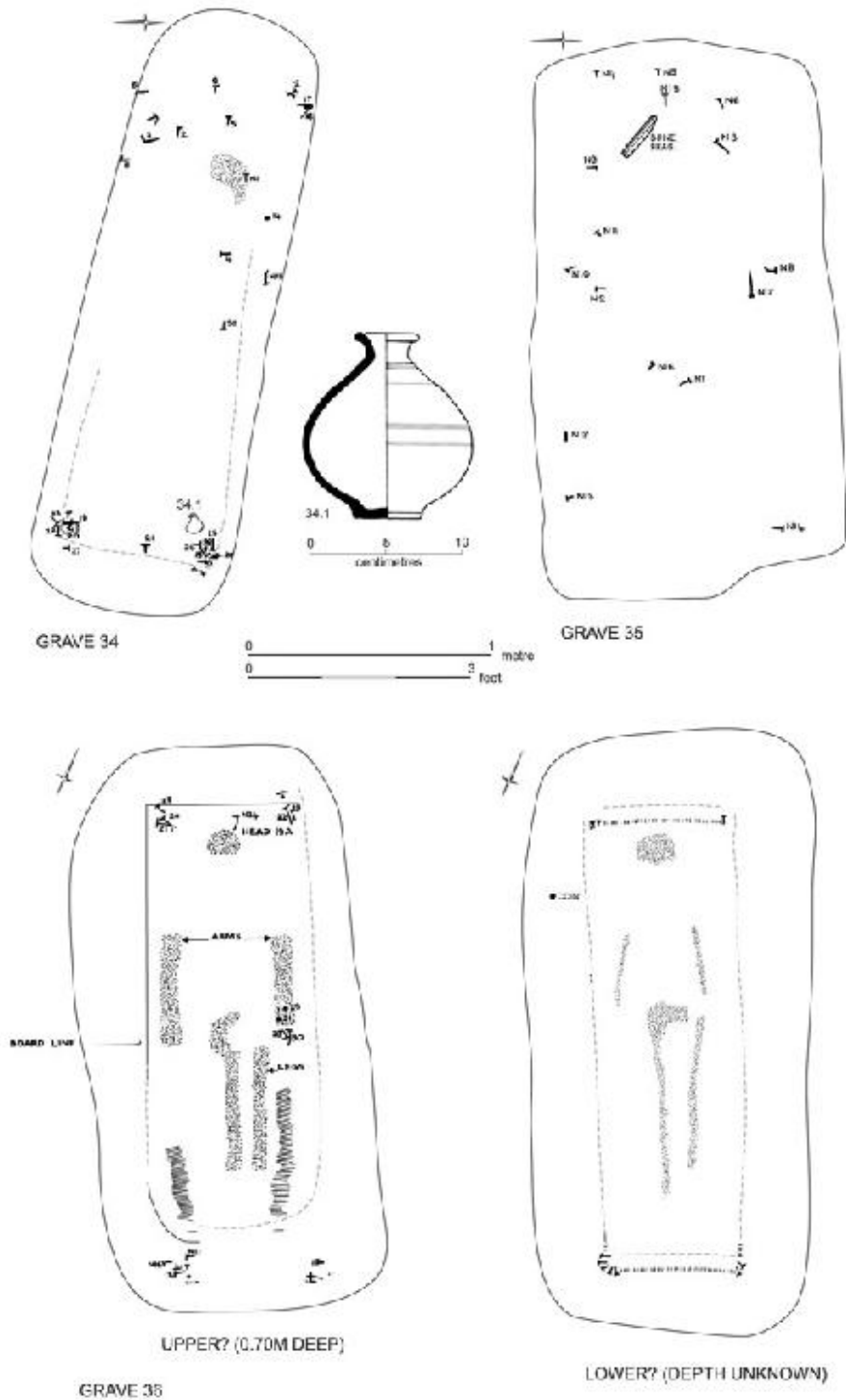
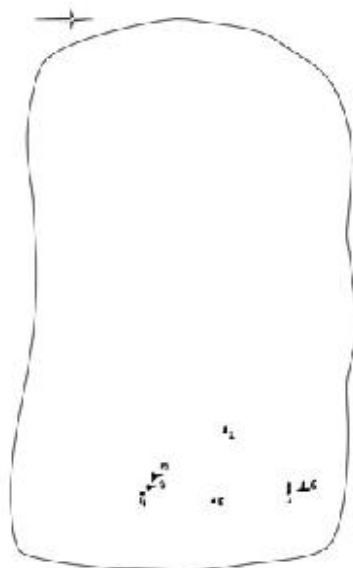


Figure 4.16. Plans and grave-goods from Graves 34, 35 and 36.



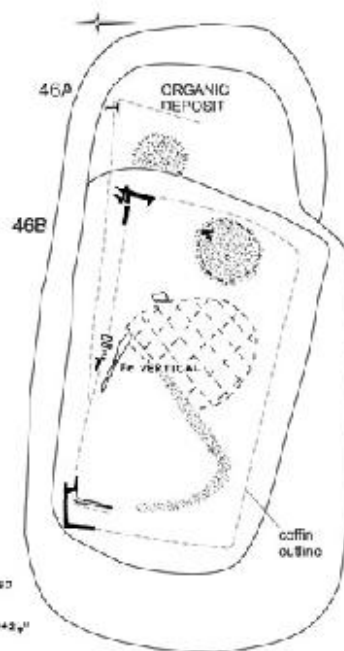
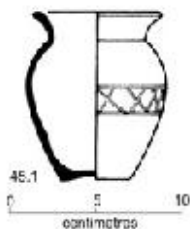
GRAVE 37



GRAVE 41



GRAVE 45



GRAVES 46A AND 46B

- ① BLACKISH STAINED SAND 0-2%
- ② DARK BROWN STAINED SAND 0-2%

Figure 4.17. Plans and grave-goods from Graves 37, 41, 45 and 46a/b.

Grave-goods:

37.1 [Not illus] Single hobnail noted, presumably at the foot of the grave; possibly residual and not indicating footwear. *Bone*: No silhouette noted. There was no bone survival. Position of hobnail may indicate that head lay to SW, but this remains uncertain.

Grave 41. (312N/-144E) (Fig. 4.17)

NB 5.34

Grave pit: Sub-rectangular but slightly tapering, with rounded corners, vertical sides and roughly level base, orientated W-E. $1.79 \times 1.02 \times 0.56\text{m}$ deep.

Grave fill: Clean sandy soil.

Grave furniture: Only one nail found, above the right leg.

Grave-goods: None.

Bone: Partial light brown sandy silt silhouette only, faint stains of legs, indicating that body lay with head to the west, legs flexed.

Grave 43. (273N/-130E)

No data available (grave marked on base plan, but no notebook reference or details recorded).

Grave 45. (317N/-125E) (Fig. 4.17)

NB 6.43

Grave pit: Straight sides, with rounded ends, orientated ENE-WSW. $c. 1.98 \times 0.84\text{m}$ (depth unknown).

Grave fill: Compact grey-brown ?turf, and sand. Disturbed by the dragline that removed the upper fill; residual RB sherd.

Grave furniture: No stain visible and no nails recorded from grave itself, but a nail recovered from the dragline had mineral-preserved oak, suggesting a coffin may perhaps have been disturbed (though this could easily have been disturbed from elsewhere). Two other nails came from the dragline, with a further nail from an unspecified location and two others recovered from the spoilheap.

Grave-goods:

45.1 Everted-rim jar in GVC fabric, with burnished lattice decoration on mid-body (Ht 97mm). Thames Estuary product (EA03). Marsh and Tyers Type II.N; AD 120–250. Placed by the right leg, on side when found.

45.2 [Not illus] Cluster of at least seven hobnails found at the west (foot) end of the grave and three others from an unspecified location (12 are indicated on the grave plan).

Bone: No survival, and poor silhouette only, of head and right leg, indicated burial with head to the east, facing up.

Graves 46A and 46B. (365N/-145E) (Fig. 4.17–18)

NB 5.35, 6.19

Grave 46A.

Grave pit: Irregular rectangle (disturbed by the digging of grave 46B), orientated ESE–WNW. Dimensions $2.28 \times 1.07 \times 0.68\text{m}$.

Grave fill: Not stated, but probably greyish-brown sand.

Grave furniture: Coffin stain noted (E end and N side). $1.12 + \times 0.18\text{m}$ + (depth uncertain). One coffin nail recorded.

Grave-goods: None recorded. To the left of the head stain (see below) were traces of an organic deposit. If this was not material deriving from decay of the body, it may have been a food offering.

Bone: No survival. Ginger sand silhouette of cranium only. The body lay with head to ESE, facing up.

Grave 46B.

This burial was dug into the fill of 46A and almost completely destroyed it. The grave diggers cut the skull of 46A in half through a vertebra. ‘This was a clear cut, so [it] must have taken place some years after the first burial when the bone was already soft’ (NB).

Grave pit: Irregularly rounded rectangle, orientated ESE– WNW. $1.37 \times 0.91\text{m}$; depth not recorded.

Grave fill: Sandy loam and medium brown gravel.

Grave furniture: The soil stain of a broad box coffin was noted, $1.22 \times 0.61\text{m}$; depth not recorded. Three iron angle brackets were noted on its N side, together with the remains of a riveted ?lock-plate (see report by Mould below). The coffin was also nailed, and replaced wood from one of these was identified as oak.

Grave-goods: None recorded, save for a blackish stain in the vicinity of the abdomen of the inhumation (see plan) that clearly represents decayed organic material. If it is not connected with the body itself, it may be clothing, or perhaps a food offering.

Bones: No survival, but a partial stain shows the head and legs of a flexed inhumation lying on its left side, with head to the ESE, facing left.

Grave 47. (292N/-152E) (Fig. 4.15)

Grave pit: Only one end seen, as rest of grave lay under road, and southern end cut by Grave 30, but probably a sub-rectangular grave, orientated SE–NW. c. $0.91 + \times 1.1 \times 1.0\text{m}$ deep.

Grave fill: Not stated.

Grave furniture: Clear stain of wooden coffin 0.56m wide (length and depth not recorded).

Grave-goods: None recorded.

Body: No stain observed.

Grave 48. (328N/-136E) Adult (Fig. 4.19)

NB 5.45, 6.29

Grave pit: Straight sides, with rounded ends, orientated NW–SE. c. $2.36 \times 0.96 \times 0.61$ m deep.

Grave fill: Not stated; residual IA sherd.

Grave furniture: Clear stain of nailed oak coffin measuring $1.68 \times 0.45 \times 0.2$ m deep. Replaced wood shows the boards to be c. 26mm thick at most. Ten nails recorded, although 12 shown on grave plan.

Grave-goods:

48.1 Pentice moulded colour coat beaker in ROX fabric. The colour coat is red-brown over a red-brown slip. There are bands of rouletting on the upper part of body. The pedestal base is slightly concave (Ht 44mm; Rim 51mm; Base 33mm; EVE 0.2). Similar to Young 1977 Type C 23.1. AD 270–400+. Found at the right foot of the body inside coffin.

48.2 [Not illus] Clear clusters of hobnails found in right and left corners of coffin foot (with 29 and 19 hobnails respectively). Grey silty material in vicinity of the hobnails suggests decayed leather.

Body: Clear silhouette of supine extended burial with head to west, turned to the right. The only bone preserved was the mandible, with poorly preserved teeth. These comprised approximately four molars, including one lower molar. Only the enamel survives (Adult presumed).

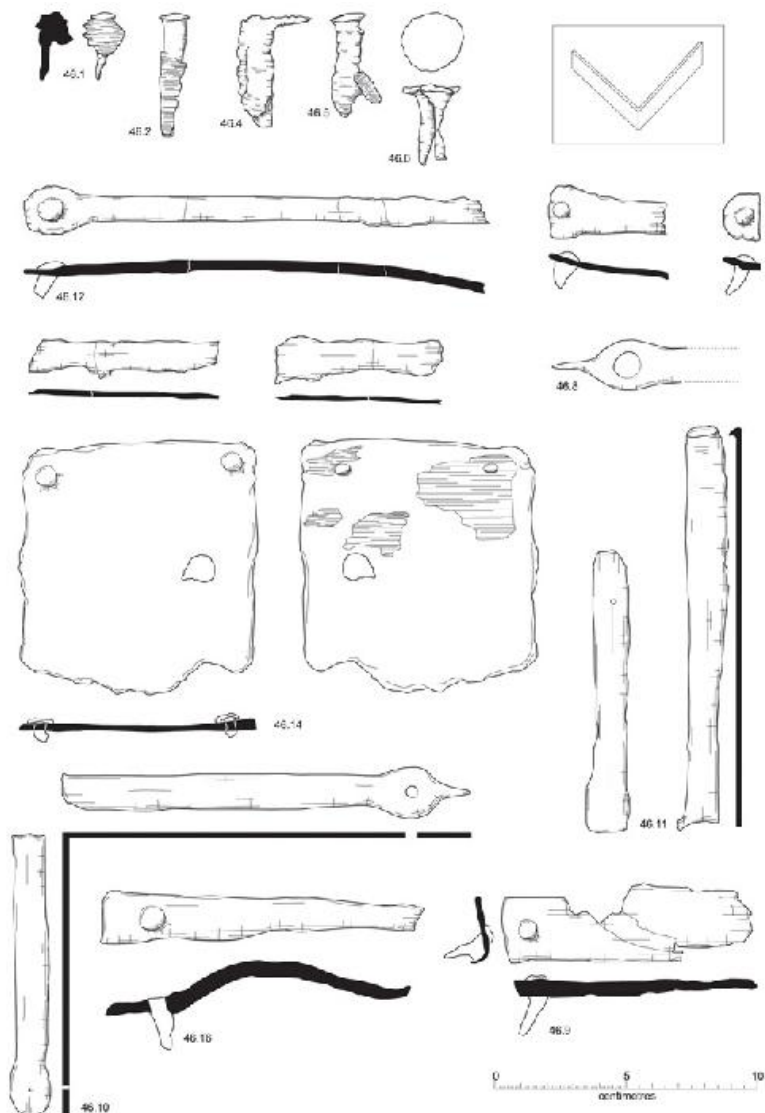


Figure 4.18. Coffin fittings from Grave 46.

Grave 49. (335N/-125E) (Fig. 4.19)

NB 4.22, 5.40, 6.31

Grave pit: Rectangular, with slightly bowed sides and rounded ends, orientated ESE-WNW, vertical sides and flat base. $2.74 \times 0.91 \times 0.61$ m deep. Cuts MIA structure PG16. **Grave fill:** Not stated, but possibly sandy loam; residual RB sherd.

Grave furniture: Clear coffin stain, but only one nail found. The

dimensions of the coffin were 1.83m long, 0.46m wide. The depth was not stated.

Grave-goods: None recorded. However, a dark stain close to the presumed left hip of the body may have been a gravegood which has perished.

Bone: No survival, black-brown sandy silt silhouette only of head, which lay to ESE, facing up.

Grave 50. (308N/-138E) (Fig. 4.19)

NB 5.39

Grave pit: Rectangular with rounded corners, orientated WNW–ESE. $2.49 \times 1.17 \times 0.74$ m deep.

Grave fill: Dirty gravel outside coffin; clean gravel inside coffin; residual IA and RB sherds.

Grave furniture: Clear stain of nailed oak coffin measuring 1.78×0.41 m (depth not recorded); 16 iron nails recovered.

Grave-goods: all three vessels lay at the foot of the grave, within the coffin (50.1 and 50.3 by the left foot, and 50.2 by the right); the excavator thought the pie-dish (50.3) may have been thrown into the grave and shattered, as a sherd from it was found in the beaker (50.1) immediately above.

50.1 Colchester Colour Coat beaker (CLC fabric). Barbotine scroll decoration in central panel (Ht 114mm; Rim 51mm). Parallel from Kiln 32 at Colchester; not good quality. Mid to late third century AD.

50.2 Oxfordshire Colour Coat (ROX) type beaker (Young Type C29); lower half of body and base only (the old break smoothed for re-use as ?drinking vessel). Stabbed squares (vertical) above a band of oblique rouletted lines. Burnished; pedestal base with foot ring (Base 30mm). Very poor quality. AD 270–360.

50.3 Flanged bowl in GRY fabric, Mucking product (RC15; Ht 70mm; Rim 140mm); found in fragments. AD 200/40– 320/50.

50.4 [Not illus] Small fragment of bronze (location not noted).

Bone: Clear dark brown/black sand stain of an extended supine inhumation with head to the west, facing left. No bone surviving.

Grave 51. (245N/-95E) (Fig. 4.19)

NB 6.63

Grave pit: Rectangular, with rounded corners, orientated NW–SE. $1.68 \times 0.81 \times 0.7$ m deep.

Grave fill: ?Sandy; 20–30 sherds of residual pottery and an iron ring.

Grave furniture: No coffin stain noted, but locations of 10 coffin nails gave dimensions of 1.41×0.58 m. Depth not stated. Replaced wood suggests oak. An iron ring, found near the right foot, may be a coffin fitting or a residual find (this object was not seen when the iron from the grave was recorded).

Grave-goods: None noted (but see under grave furniture). *Bone:* Ginger sand stain only of head and part of the spine. This indicated that the body lay on its right side, possibly flexed, with head to the SE, facing right.

Grave 52. (284N/-135E) (Fig. 4.20)

NB 6.51

Grave pit: Tapering rectangular (wider at the head end), with rounded ends, orientated NW–SE. $2.18 \times 0.91\text{m}$ (depth uncertain). Coffin placed in the grave at an angle (?to allow room for grave goods). Reference to Grave 72 underlying this grave, of which only 5cm depth survived. Grave was hurriedly excavated ahead of the dragline.

Grave fill: Not stated.

Grave furniture: Clear coffin stain giving dimensions: $1.83 \times 0.38 \times 0.61\text{m}$ deep. Five nails recorded from this grave, but none were seen by specialist.

Grave-goods:

52.1 Crudely-thrown, plain-rimmed pie dish in GRY fabric; burnished all over outside and inside walls (Ht 42mm; Rim 108mm; Base 94mm; EVE 1.0). A post-firing graffito on the exterior base may read 'E'. Mucking product (RB03). Poor quality. AD 110/20–250/300.

52.2 Five fragments of a distorted and bent oval circular cross-sectioned bracelet or armlet (AML No. 10; No. 6514). W. 2.5–3mm, total Wt 7g. The external surfaces are decorated with transverse grooves.

52.3 Six refitting fragments, some bent, of a circular cross-sectioned bracelet or armlet (AML No. 8; No. 6514); D. 2mm, total Wt 7g. There are no evident surviving terminals. The bracelet's principal decorative scheme consists of unevenly (crudely) spaced transverse grooves with occasional rectangular panels. For a parallel, see Neal (1974, fig. 60.153), found in the fourth-century destruction rubble of the villa at Gadebridge Park, Herts.

52.4 Bracelet or armlet (AML No 23; No. 6515). Bent out of shape.

52.5 Fragments of two 'D'-shaped cross-sectioned bracelets or armlets (AML No. 22; No. 6513). The terminal of the larger fragment (internal Diam. c. 70mm, W. 3.5mm, Th. 2mm, Wt 4g) is flattened to form a spatula-like end. The smaller fragment measures 2.5mm wide, 1.5mm thick and weighs 1g. Both pieces are decorated on the exterior surface, the larger with alternating zones of rectangular panels and transverse grooves (each c. 5mm wide), and the smaller bracelet with grooves only (the surface is pitted, obscuring/ masking the decoration).

52.6 Fragment of a small 'D'-shaped cross-sectioned bracelet or armlet (AML No. 1/6518). The surface is pitted and corroded, but sufficient detail survives to reveal alternate zones of transverse grooves and

rectangular panels, similar to 52.5. L. 35mm, W. 3mm, Th. 2mm, Wt 1g.

52.7 Three fragments of an oval 'D'-shaped cross-sectioned bracelet or armlet (AML No. 21; No. 6513). Internal Diam. c. 30–60mm, W. 3mm, Th. 2mm, total Wt 3g. The external surface of the largest fragment is decorated with alternating zones of rectangular panels (3–4mm) and transverse grooves (c. 5mm wide).

52.8 Penannular slightly bulbous roughly circular cross-sectioned bracelet or armlet (Diam. 5–6mm), tapering to rectangular flattened terminals (Th. 2mm; AML No. 372). The terminals are decorated with transverse bands and with a single circular impression. There is no evidence to suggest the terminals were lap-soldered or are missing attachments (see Crummy 1983). The bracelet's internal diameter is estimated between 60mm and 70mm and it weighs 21g. The bracelet is distorted, presenting a 'handle-like' aspect, and may represent post-mortem removal of the piece from the body and its subsequent placement under pottery dish 52.1. The bracelet is dated to the third–fourth centuries AD on typological grounds, with several later fourth-century parallels (E. Swift pers. comm.).

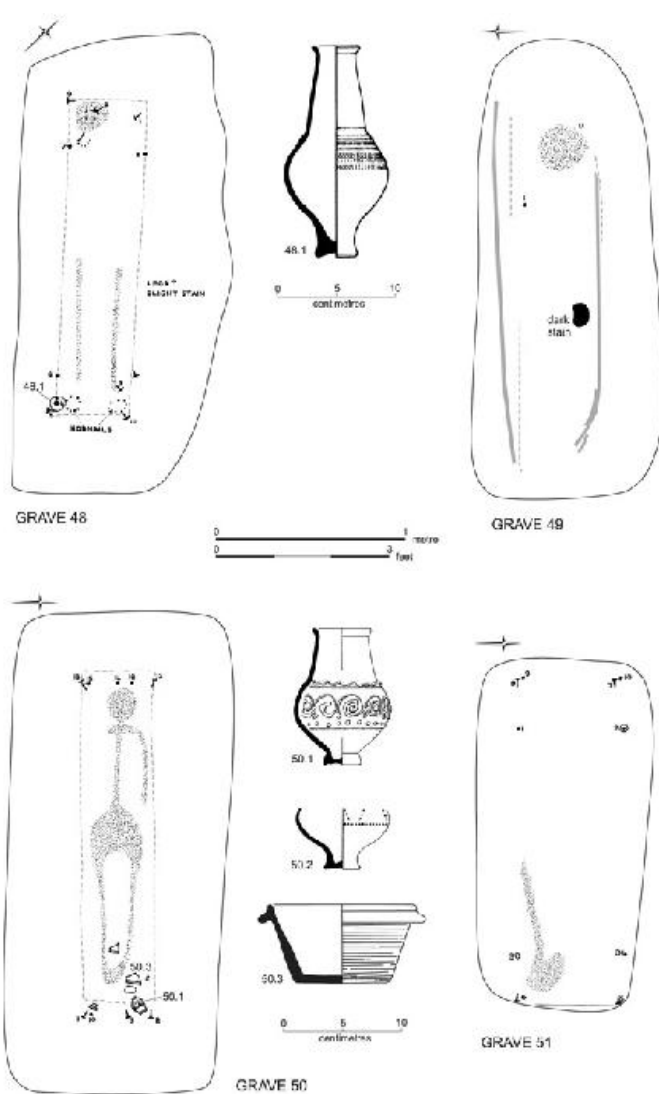


Figure 4.19. Plans and grave-goods from Graves 48, 49, 50 and 51.

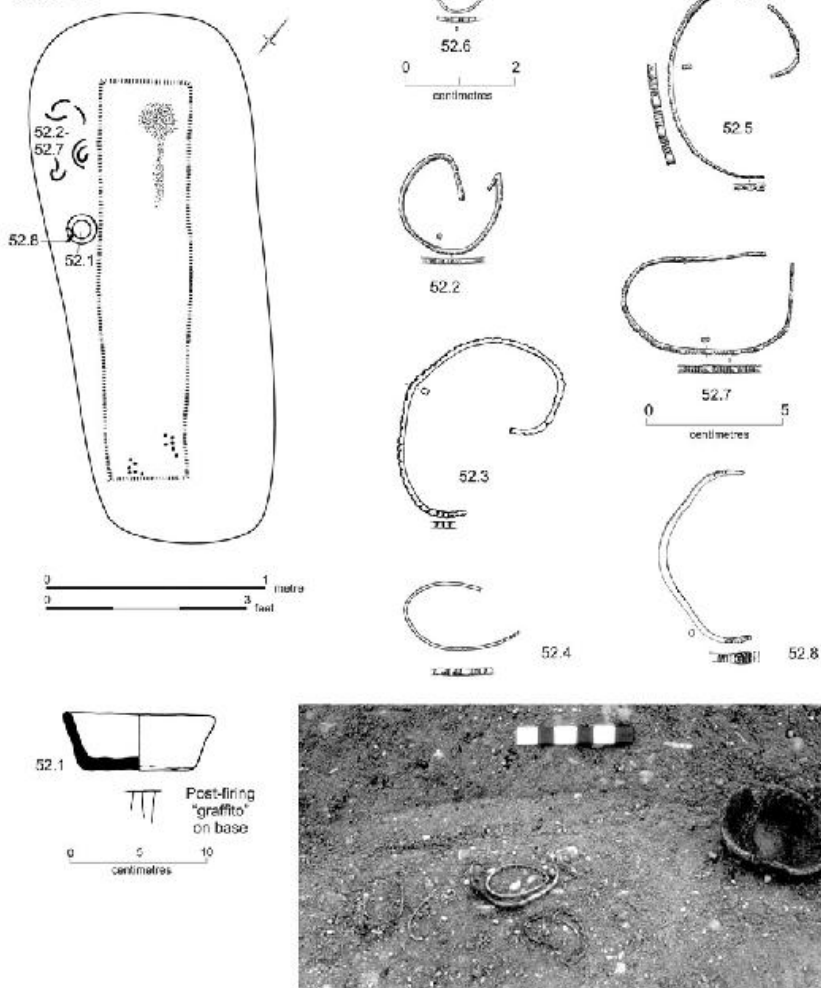


Figure 4.20. Plan and grave-goods from Grave 52.

52.9 [Not illus] Small fragment of thin rectangular cross-sectioned bracelet or armlet; L. 15mm, W. 4.5mm, Th. 0.5mm, Wt < 1g (AML No. 330; No. 65/18). Decorated with a single circular impression. Recovered from the grave cut, this fragment is stylistically the same as the other examples listed above, and may form part of 52.4.

All of the bracelets lay in the grave outside the coffin, on its right side and can be dated to the third to fourth century AD on typological grounds (see Crummy 1983 for comparative examples). A darker stain in the vicinity of the bracelets suggests they had been placed in an organic container, possibly of plaited reed or straw, as bracelet 52.8 showed clear traces of plaited material in its corrosion products.

52.10 [not illu] Hobnails in the coffin foot showed that a pair of hobnailed boots had also been included (54 and another five hobnail shanks).

Bone: No survival, but stain of cranium and spine suggests the burial was of an adult, probably supine and extended, with head to SE, facing up.

Grave 53. (290N/-135E) (Fig. 4.21)

NB 6.46–8

Grave pit: Cut at the head by the quarry dragline, vertical sides and flat base, orientated WNW–ESE. Cuts Grave 70 and 71. $2.43 + \times 0.91 \times 1.00\text{m}$ deep. Excavated in haste. *Grave fill:* Not given; residual RB sherds.

Grave furniture: Seven nails recorded (but a maximum of nine seen) from nailed oak coffin, though stain only recorded at the foot-end of the grave. Coffin 0.46m wide, length and depth not recorded.

Grave-goods:

53.1 [Not illu] Clusters of hobnails found at the west end of the grave suggest boots were included (40 in total).

Bone: ‘Good preservation’; burial probably lay with head to the ESE.

Remarks: Part of Grave Group II (Graves 53, 67, 68, 69, 70 & 71).

Grave 55. (313N/-136E) Adult (Fig. 4.21)

NB 5.46

Grave pit: Sub-rectangular, with rounded corners, nearvertical sides and flat base; large and deep grave with space around the coffin on three sides, orientated WNW–ESE. $2.21 \times 1.22 \times 1.07\text{m}$ deep.

Grave fill: Not stated (grave picked as ground frozen). *Grave furniture:* Clear dark brown stain of nailed oak coffin measuring $1.75 \times 0.41 \times 0.2\text{m}$ deep. Replaced wood indicated wood joints of 14–40mm in thickness.

Grave-goods:

55.1 [Not illu] Two groups of hobnails found in the coffin foot. The right shoe appears to lean against the end board of the coffin (61 in total).

Bone: Poor. Little bone survival in the cranium. Good dark brown sand silhouette showing body extended and supine with head to the west facing up. Molar and perhaps premolar fragments; enamel ‘shells’ only and encrusted on the exterior surface. The best preserved is a molar worn down level with the central grooves; wear stage 4 (young adult to mature adult).

Grave 57. (345N/-140E) (Figs. 4.22 & 4.25)

NB 5.36–8

Grave pit: Rectangular, with rounded ends, steeply sloping sides and

flat base, orientated N-S. $2.13 \times 0.46\text{m}$ deep, width not known. Cut by Graves 28 and 60.

Grave fill: Not stated.

Grave furniture: No clear record. No sign of coffin stain or nails.

Grave goods:

57.1 [Not illus] Hobnail cluster at the foot of the grave (41 in total).

Bone: Traces only noted; location of hobnails suggests body lay with head to the WSW.

Remarks: Part of Grave Group I (Graves 28, 57, 58, 60, 61 & 62).

Grave 58. (343N/-145E) (Figs. 4.21 & 4.25)

NB 5.36–8

Grave pit: Rectangular, with rounded ends, steeply sloping sides and flat base, orientated WSW–ENE. Cuts Grave 62; cut by Graves 28 and 61. Dimensions $2.40+ \times 0.61\text{m}+$; depth unknown.

Grave fill: Not stated; some residual RB sherds.

Grave furniture: Nails found suggesting nailed coffin, but no stain either observed or noted.

Grave-goods:

58.1 [Not illus] Two hobnail clusters at the foot of the grave suggest the presence of sandals (59 in total).

Bone: Stain of the hips and legs of an ?adult noted, otherwise no bone survival, aside from a skull fragment. Location of this and of hobnail clusters suggest a burial with head to the ENE.

Remarks: Part of Grave Group I (Graves 28, 57, 58, 60, 61 & 62).

Grave 60. (340N/-140E) (Figs. 4.22 & 4.25)

NB 5.36–8

Grave pit: Rectangular, with rounded corners, vertical sides and flat base, orientated SW–NE. $1.37 \times 0.53\text{m}$ deep, width uncertain. Cuts Grave 57.

Grave fill: Unstated, but a ‘dark red stain’ at the bottom of the grave was noted. This may be an odd fill, or equally, part of a batten.

Grave furniture: None noted.

Grave-goods:

60.1 [Not illus] Two clear hobnail clusters found in the foot of the coffin (32 at the right foot and 24 at the left).

Bone: No stain noted, no record of survival. Location of hobnails suggest that body lay with head to WSW.

Remarks: Part of Grave Group I (Graves 28, 57, 58, 60, 61 & 62).

Grave 61. (348N/-145E) (Figs. 4.22 & 4.25)

NB 5.36–8

Grave pit: Rectangular, with rounded corners, vertical sides and flat base, orientated WSW–ENE. Cuts Grave 58 and 62. c. $1.37+ \times 0.61$

and 0.46m deep.

Grave fill: Dark fill, perhaps of turves.

Grave furniture: None noted.

Grave-goods: Two pottery vessels lay at the foot of the grave.

61.1 Flanged bowl in GRY fabric (Ht 69mm; Rim 152mm; Base 71mm). Mucking product (RC10). Developed flanged bowls Cam 305. AD 200/40–320/50.

61.2 Flagon in Alice Holt grey ware fabric B with lattice decoration from maximum girth to neck and burnish lines below (Ht 178mm; Rim 43mm; Diam. 140mm; Base 61mm). Lyne and Jefferies 1979 Type 8.12 (Overwey). Very rare in the Thames Estuary. AD 270–400+.

Bone: No data.

Remarks: Part of Grave Group I (Graves 28, 57, 58, 61 & 62). This is possibly the grave with the latest dateable goods in the cemetery.

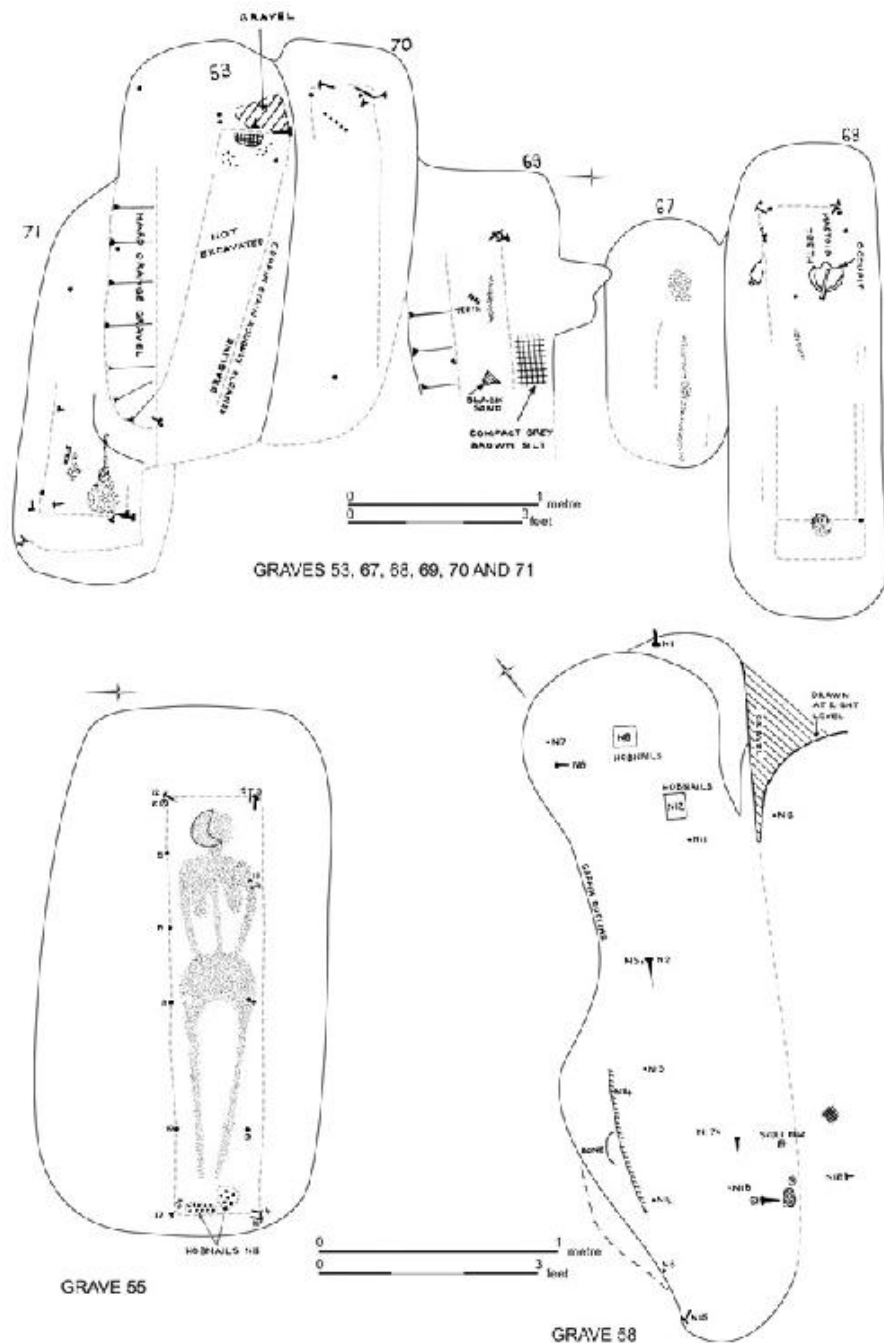


Figure 4.21. Plans of Grave Group II comprising Graves 53, 67, 68, 69, 70 and 71, and of Graves 55 and 58.

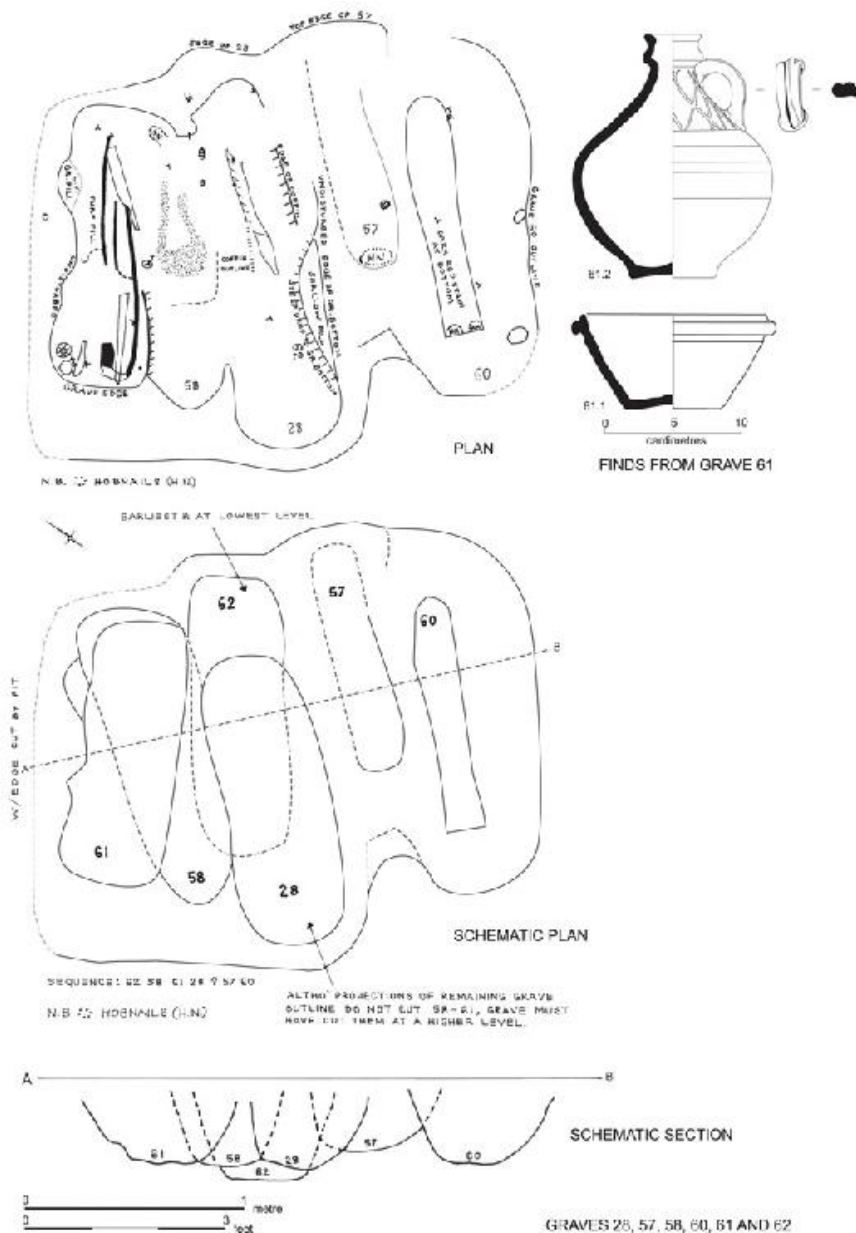


Figure 4.22. Plans, section and grave-goods from Grave Group I comprising Graves 28, 57, 58, 60, 61 and 62.

Grave 62. (348N/-139E) (Figs. 4.22 & 4.25)

NB 5.36–8

Grave pit: Rectangular, with rounded corners, steeply sloping sides and generally flat base, orientated WSW–ENE; heavily truncated by Graves 28 and 58. Stratigraphically this is the earliest of the burials of the grave 28 complex, and the most disturbed. $2.13 \times 0.61 \times 0.61\text{m}$ deep.

Grave fill: Unstated.

Grave furniture: Three nails seen (numbered 60, 61 and 62, implying part of a large group originally).

Grave-goods: None reported.

Bone: No data.

Remarks: Part of Grave Group I (Graves 28, 57, 58, 60, 61 & 62).

Grave 63. (350N/-132E) Adult (Fig. 4.23)

NB 6.35

Grave pit: Rectangular, with rounded ends, steeply sloping sides and flat base, orientated WSW–ENE. $1.98 \times 1.09 \times 0.61\text{m}$ deep. Cuts Grave 64.

Grave fill: Not stated; greyish gravelly fill inside coffin; residual RB sherds.

Grave furniture: Clear black stain of nailed poplar coffin. Individual floorboards were evident. Some nails found. Dimensions: $1.73 \times 0.46 \times 0.26\text{m}$ deep. A stain in the coffin near the head may be the remains of a pillow.

Grave-goods:

63.1 [Not illus] Cluster of hobnails near the coffin foot. Possibly not on the feet of the body, but placed on the coffin (60 in total).

Bone: Clear ginger brown sand silhouette showing the head, legs and inturned feet. Poor bone survival otherwise. Body supine and extended with head to ENE (not to WSW as marked on *Site Atlas*), facing up.

Grave 64. (345N/-133E) (Fig. 4.23)

NB 6.37

Grave pit: Rectangular, with slightly bowed sides and rounded ends, oriented WSW–ENE. $1.52 \times 0.61 \times 0.71\text{m}$. Cut by Grave 63.

Grave fill: Within coffin stain recorded as dark grey-brown silty sand. Possibly turves on/in the coffin, indicated by grey/brown compact sandy silt. Residual RB sherds. *Grave furniture:* Good stain of nailed oak coffin. Three nails recovered, two being at the single surviving corner. Dimensions: $1.37 \times 0.56\text{m}$, depth not stated. Clear stain of coffin lid noted in the section.

Grave goods: Both at the side inside the coffin at base of grave.

64.1 Fine ware dish in oxidised fabric, with form that falls in size between Chenet 313 and 314 (Rim 200mm; Base 70mm; Ht 70mm;

EVE 1.0). The slip and the finish seem to be inferior to Argonne products, and nor are these 'rotbraun gestreichene Keramik' (T. Clerbaut, J. Bird pers. comm.). Late Roman, and probably a continental import, but precise identification remains uncertain. Matching pair with 64.2.

64.2 As 64.1, but Base 75mm.

Bone: No stain noted. No survival. Size of grave may indicate a child/juvenile.

Grave 65. (340N/-130E) (Fig. 4.23)

NB 6.39

Grave pit: Rectangular with rounded corners, vertical sides and flat base, orientated W-E. $1.75 \times 0.84 \times 0.76$ m deep. *Grave fill:*

Soft sandy gravel.

Grave furniture: Clear stain of nailed oak coffin, with nails at the sides and ends and not at the corners, measuring $1.52 \times 0.61 \times 0.25$ m. Coffin apparently 'opened or decaying', as wider at the top than the bottom.

Grave-goods: None.

Bone: Clear compact brown sand head silhouette. The head was to the west, facing up and apparently was seen *on* the (floor of?) coffin.

Grave 66. (310N/-140E) (Fig. 4.23)

NB 6.45

Grave pit: Sub-rectangular grave with rounded ends, vertical sides and flat base, orientated WNW-ESE. $1.3 \times$

0.69×0.36 m deep.

Grave fill: No details; residual fired clay.

Grave furniture: Stain of nailed oak coffin measuring 0.86×0.33 m (depth unknown); five nails recovered.

Grave-goods: None.

Bone: Nebulous ginger sand body stain but indicates that head to west, facing up. Child's grave by size.

Grave 67. (300N/-135E) (Fig. 4.21)

NB 6.49

Grave pit: Elongated oval grave, orientated WNW-ESE. $1.73+ \times 0.66 \times 0.56$ m. Probably cut by Grave 68.

Grave fill: ?Clean gravel on hard orange gravel natural. *Grave furniture:* Possible coffin stain indicated on plan; wood on one nail unidentifiable.

Grave-goods:

67.1 [Not illus] 'Some small fragments of what looks like lead' including a curved piece which appears to have been the base of a vessel.

Bone: None surviving but silhouette indicates supine extended grave with head to WNW.

Remarks: Part of Grave Group II (Graves 53, 67, 68, 69, 70 & 71).

Grave 68. (303N/-135E) Adult Male (Fig. 4.21)

NB 6.49

Grave pit: Rectangular grave with rounded corners, orientated NW–SE. $2.81 \times 0.91 \times 0.44\text{m}$ deep. Probably cuts Grave 67.

Grave fill: Gravelly fill with residual worked flint.

Grave furniture: Clear stain of nailed oak coffin: dimensions $1.88 \times 0.54 \times 0.21\text{m}$ deep. At least 12 nails clustered at the two better preserved corners.

Grave-goods:

68.1 [Not illus] Hobnails. These appear to have been scattered within the grave. Also two lines of hobnails found 5cm apart (95 in total).

Bone: Stain, and some bone survival. Some evidence suggests decapitation and head placed between legs as a fragment of femur or tibia lay ‘across the skull’ (Dr M.J. Catton identified this bone). The head was to the west.

Remarks: Part of Grave Group II (Graves 53, 67, 68, 69, 70 & 71).

Grave 69. (298N/-135E) Adult (Fig. 4.21)

NB 6.49

Grave pit: Heavily disturbed grave (cut by Grave 70), orientated W–E; only one corner recognised in hurried excavation. $1.22+ \times 0.61\text{m}$, depth uncertain.

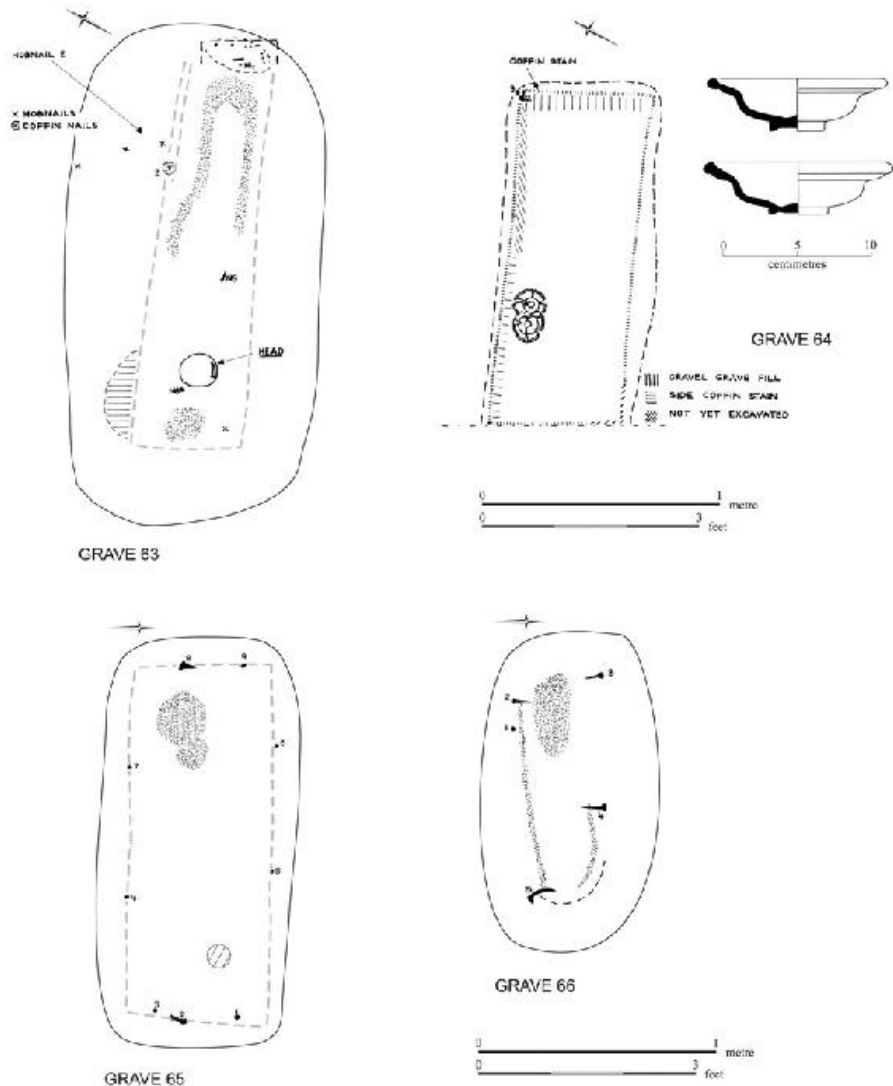


Figure 4.23. Plans and grave-goods from Graves 63, 64, 65 and 66.

Grave fill: Not noted; residual IA sherds.

Grave furniture: Only six nails from the NW corner of the coffin were recovered; nailed oak coffin. Thought to be c. 1.0m + long.

Grave-goods: None recovered.

Bone: Teeth recovered, suggesting burial lay with head to the west. About three molars, very fragile, represented by enamel only. Adult presumed.

Remarks: Part of Grave Group II (Graves 53, 67, 68, 69, 70 & 71).

Grave 70. (294N/-135E) (Fig. 4.21)

NB 6.47

Grave pit: Just one end of grave excavated (cut through by Grave 53, but deeper than it; cuts Grave 69); section shows vertical sides and flat base, orientated NW–SE. Approx $2.13 \times 0.76 \times 1.07\text{m}$ deep.

Grave fill: Dark grey/brown silt (?turf); residual IA and RB sherds.

Grave furniture: At least six very large nails recovered from identified coffin stain from nailed ?oak coffin, 0.43m wide and 0.25m deep.

Grave-goods:

70.1 Group of five hobnails form a diagonal line in relation to coffin: ? shape of sole fallen upright (46 in total).

Body: No evidence; location of hobnails at the west end may indicate that head lay to ESE.

Remarks: Part of Grave Group II (Graves 53, 67, 68, 69, 70 & 71).

Grave 71. (287N/-130E) Adult (Fig. 4.21)

NB 6.48

Grave pit: Cut through by deeper Grave 53, orientated NW–SE. $2.13 \times 0.76 \times 0.76\text{m}$ deep.

Grave fill: Not recorded; residual RB sherds.

Grave furniture: At the east end of the grave ten nails were recovered, and stains of that end and both sides of a nailed oak coffin recognised, measuring $1.52 \times 0.61\text{m}$ (depth not recorded).

Grave-goods:

71.1 [Not illu] Hobnails (no further details).

Body: Poor bone preservation. Hobnails at east end of grave may suggest that the burial had its head to WNW, facing up. Only the remains of one molar (enamel only) seen; adult presumed.

Remarks: Part of Grave Group II (Graves 53, 67, 68, 69, 70 & 71).

Grave 72. (282N/-135E)

NB 6.51

Grave pit: No details – this had been cut by the dragline, and by Grave 52, and only 5cm was left.

Grave fill: No data; a residual sherd noted.

Grave-goods: None noted.

Bone: No data.

Grave 73. (244N/-127E) (Fig. 4.24)

NB 7.79

Grave pit: Rectangular grave with rounded corners, sloping sides and base, orientated NW–SE. $0.97 \times 0.53 \times 0.18\text{m}$ deep.

Grave fill: In bottom, soft gravel, with no hard-pan; residual RB sherd.

Grave furniture: Poor stain of a nailed ?poplar coffin. Stain of coffin ?

floor-board seen. $0.79 \times 0.35 \times 0.13\text{m}$ deep. Sixteen nails found.

Grave-goods: None recorded.

Bone: No survival, poor dark brown/black stain showing part of the legs only indicates that burial lay extended with head to SE. Size indicates child's grave.

Grave 74. (248N/-111E) (Fig. 4.24)

NB 6.58

Grave pit: Rectangular with rounded corners, near-vertical sides and undulating base, orientated WNW–ESE. $2.01 \times 1.02 \times 0.61\text{m}$ deep.

Grave fill: Loam; soil mark on south side suggests possible turves.

Grave furniture: No coffin stain, but locations of 23 nails indicate nailed oak coffin measuring $1.68 \times 0.61 \times 0.36\text{m}$.

Grave-goods:

74.1 Narrow-necked jar in GRY fabric (Rim 30mm; Ht 154mm; Base 45mm; EVE 1.0). Mucking product (KA01). Cam 282; Marsh and Tyers Type II.R. Form is common in Essex but very rare in London. AD 110/20–200/10. This lay inside the coffin at the top right corner.

74.2 Part of a twisted bronze bracelet, circular cross-section, L. 48mm, Wt 2g, Diam. estimated between 50–60mm. At the mid-point are adhered fragments of mineralised wood. (AML No. 373; No. 4/187). Found in the area of the right shoulder. This form of bracelet is common during the Romano-British period, with hook and clasp terminals to close the item in place (see Crummy 1983, 38–9).

Bone: Brown sandy head and body silhouette, showing that head lay to WNW, facing up.

Grave 75. (242N/-110E) Adult (Fig. 4.24)

NB 6.58

Grave pit: Rectangular grave with rounded corners, vertical sides and flat base, orientated WNW–ESE. $1.83 \times 0.63 \times 0.30\text{m}$ deep.

Grave fill: Soft sand and area of fawn loam; residual RB sherds.

Grave furniture: None.

Grave-goods: None.

Body: Poor bone preservation, but parts of skull preserved, including seven teeth; ginger sand body stain indicates a supine extended burial with head to WNW, facing up.

Grave 76. (247N/-132E) (Fig. 4.24)

Grave pit: Oval, with rounded ends and rounded base, orientated NW–SE. $1.14 \times 0.61 \times 0.2\text{m}$ deep.

Grave fill: Not stated.

Grave furniture: Black silt stain of nailed coffin (wood unidentifiable), 0.76m long. Width and depth not known. Single nail may be from

coffin or a grave-good.

Grave-goods: None noted (but see under grave furniture).

Bone: Head stain only, indicating that head lay to NW facing up. Size indicates child's grave.

Grave 77. (242N/-120E) (Fig. 4.24)

Grave pit: Rectangular, with rounded corners, vertical sides and flat base, orientated NW-SE. One side slightly bowed. $1.88 \times 0.84 \times 0.61\text{m}$ deep.

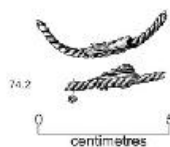
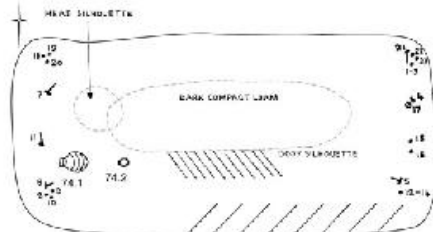
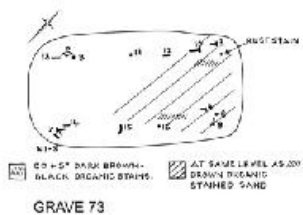
Grave fill: Grey-brown sand and loam; residual RB sherds. *Grave furniture:* Clear brown/black stain of nailed oak coffin, measuring $1.7 \times 0.43 \times 0.23\text{m}$ deep. Coffin foot-end clearly indicated by packed turves. Twenty-one coffin nails in all. Right side of the coffin warped. At a depth of 0.6m a 'large fleshy root was found, also bark of a silver birch'.

Grave-goods: None noted. Stain in coffin corner to left of head may be organic grave-good, if not displaced head stain. *Bone:* No survival, ginger sand head stain only noted, indicating that head lay to SE, facing up.

Overview

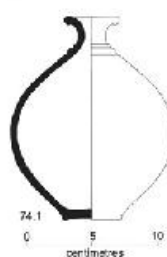
Cemetery I contained, as well as the 10 cremation burials discussed below, 64 inhumation burials of the early second to fourth century. In the sandy soil, bone preservation was extremely poor, with only small fragments of bone (if any) surviving in many cases. Body stains were, however, common, and often provided sound information as to body position and orientation within the grave. Age could sometimes be determined, but sex was only established in two cases. Similarly, coffin stains were also prevalent and, using the carefully recorded locations of associated nails, their size and form could be reconstructed (see Mould, below). This cemetery saw a range of different burial practices, with variations in rite, burial positioning, the use of coffins, grave elaboration, multiple graves and variable grave-good provisioning. These each will be dealt with in turn below. The lack of sexing

information means that sex-related variation cannot be addressed, but it is possible that some of the distributional patterning and artefactual provisioning relates to whether interments were of males or females, as was seen clearly, for example, at Lankhills (Clarke 1979; although it should be borne in mind that the patterning seen at later Roman 'organised' urban cemeteries may not replicate that seen at earlier rural sites such as Mucking). Associated grave-goods were used to divide graves into three broad phases: mid first to earlier second century, mid second to mid third century, and a later phase of the mid third century onwards. A third of the graves (21 of 63) could be phased in this way, and this was used to examine whether any of the variation in burial practice outlined below was chronological.



GRAVE 76

GRAVE 74



GRAVE 77

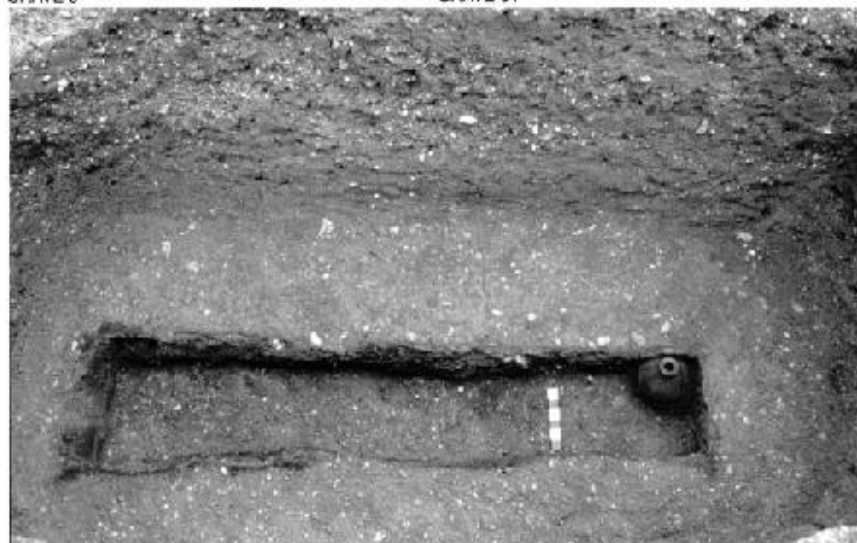
Figure 4.24. Plans and grave-goods from Graves 73, 74, 75, 76 and 77.



GRAVE 3



GRAVE 64



GRAVE 29



GRAVES 28, 57, 58, 60, 61 and 62

Figure 4.25. Photographs of Graves 3, 29, 64 and Grave Group I.

Table 4.3. Summary of burial attributes from Cemetery I cremations.

Grave No.	Crem/Inh	Sex	Age	Cremated Bone	Grave L.	Grave W.	Grave D.	Container/ Marker	Footwear	Vessels	Other ornaments	Date
25	Crem	M	Adult	470g	0.38	0.28	?	Vessel	N	2		AD 80/90-100/110
26	Crem	M/?	Adult/ Infans	148g + 15g	0.53	0.53	0.10	None	N	1	Brooch	AD 70-130
27	Crem	?	Adult	590g	0.51	0.30	0.09	None	N	1	Brooch	AD 70-120
38	Crem	?	Infans	68g	0.30	0.23	0.06	?Box	N	0		?
39	Crem	?/M	Juvenilis/ Adult	480g + 1180g	0.58	0.53	0.38	None	N	1		AD 70-150
40	Crem	M	Adult	810g	0.61	0.61	0.61	Vessel	N	2	Brooch	AD 50/60-80/90
42	Crem	?	Adult	18g	-	-	-	Vessel	N	1		AD 70+
44	Crem/?Pyre site	?	Infans II	17g	0.61	0.46	0.19+	?Casket/Box	N	0		?
56	Crem	M	Adult	1250g	0.61	0.41	0.30	?Bier	N	0		?
59	Crem	M	Adult	650g	0.60	0.56	0.25	?Bier	N	1		AD 70-150

Considerable variation was observed among the small number of cremation burials, in terms of the use of vessels as cremation urns and accessory vessels, the provisioning of grave-goods, and the selection of cremated remains for inclusion in the grave. Before discussing this further, the 10 cremation features need to be categorised by whether they are true cremation burials, whether they could be actual cremation pits, or whether they simply represent the redeposition of debris from the act of cremation (*cf.* McKinley 2000 for a discussion on the identification of these three types).

Cremation Burials or Pyre Features?

Only two features, Cremations 26 and 44, had any indication of burning of the pit itself, and this was limited in the former to the identification of “some pinkish soil”, which is considered insufficient evidence (see below for Cremation 44). Cremation 26 also had charcoal in the pit fill, as did three of the four other features that also contained burnt flint (Cremations 38, 39 & 44). Might these four features represent the redeposition of debris from the cremation pyre,

as opposed to true cremation burials? Cremation 26, however, had both an accessory vessel and an accompanying unburnt brooch. The weight of cremated bone was 163g from two individuals (an adult male and a child); this grave should be considered a true cremation burial, but with partial collection of material from the pyre (the amount of human bone remaining after the cremation of an adult usually weighs between 1000g and 2500g; McKinley 2000). Similarly, Cremation 39 included 480g of cremated bone, and was provided with an accessory vessel, and is also therefore considered a cremation burial. Taphonomic factors will of course have played a part here. It is notable at Mucking that urned cremations tend to contain larger amounts of cremated bone than those inserted into the ground without urns; as well as collection practices, this seems to have resulted in differential preservation of the bone.

Cremations 38 and 44, however, contained no accompanying urns or other grave goods, and were represented by seemingly token amounts of cremated bone: 68g and 17g respectively. Although the effect of soil conditions on bone preservation may be dramatic, the weight of bone in these features, when compared to others in the immediate area, is smaller (though, it should be noted, probably comparable with the double burial in Cremation 26), and is therefore considered a real pattern. Cremation 38 was identified as *Infans*, which may possibly account for the small amount of human bone recovered (Anglo-Saxon infant cremations at Spong Hill in Norfolk typically produced less than 100g of cremated bone: McKinley 1994, table 2); other material recovered from the burial comprised two nails. The feature itself was small: only $0.3 \times 0.23\text{m}$ in area and 0.06m deep, and this may well represent the redeposition of pyre material, given the inclusion of charcoal in the grave fill. The orientation of the nails, however, might indicate that the child's remains had been placed in a wooden box (Q. Mould pers. comm.).

Cremation 44 might also be identified as pyre debris, although the feature description might also suggest that it was the site of the cremation rite itself: measuring $0.61 \times 0.46\text{m}$ in area, and at least 0.19m deep, the pit contained 'dark earth and charcoal together with fire-cracked and dark burnt flints'; a lens of red burnt earth was also noted on the northern side. While the 14 nails recovered were thought perhaps to represent a small box or casket, they could also have been the remains of a bier. Mould reports: "While one was a small Type Ib nail 34mm long, the others were of much smaller size best described as tacks (as also seen in Grave 66 in Cemetery I). The two complete examples measured no more than 21mm in length with small flat heads just 7mm wide. These tacks were uncorroded, indicating that they had been burnt and it is likely that they came from a small

wooden item that had accompanied the body of the child onto the pyre". The token amount of cremated bone (17g, identified as *Infans II*) suggests that the bulk of the cremated bone had been removed elsewhere (though no other burials in this phase of the cemetery were identified as being within this age range). This is therefore not a *bustum* type burial (where the cremated remains are buried *in situ*, and where at least 1kg of human bone would be expected if it were an adult; McKinley 2000, 40), but it may be a pyre site. It may also be significant that Cremations 38 and 44 both lay on the southern edge of the extent of this small cemetery, and could represent peripheral activity. Cemetery I, therefore, should be seen as containing nine probable cremation burials (with 10 individuals, one of which may result from the redeposition of pyre debris), and a possible pyre feature.

Use of Grave-goods in Cremations

Just three of the cremation burials were recorded as having the cremated remains contained (or partly contained) within a funerary urn (Table 4.4). All vessels employed as cremation urns were grey ware jars of various sizes. Such jars are the most common cinerary container in Romano-British cremations (Philpott 1991, 30; Biddulph 2005, 27). While only the base of that in Cremation 42 survived after plough-truncation, the complete vessels ranged from 154mm (Cremation 40) to 200mm+ in height (Cremation 25). All of these urned cremations were interments of single individuals, and all were identified as adult (two male, and one unsexed; the two identified as male were also provided with non-local pottery beakers as accessory vessels); no obvious clustering in terms of these different attributes was observed.

While the use of caskets was mooted as a possibility by the excavators in some of these burials due to the presence of nails in the grave fill, no strong evidence exists. Four burials contained up to three nails, but these are not in sufficient numbers to suggest the former existence of a nailed box or casket, and are scattered through the grave fills. The one feature with sufficient nails, Cremation 44, has already been discussed above, and these suggested to have been remnants of a wooden pyre-good; the nails from this cremation were found scattered through the grave fill (and displaced into the overlying soil). It is possible that the smaller numbers of nails incorporated within other burials are derived from structural features, such as pyres associated with the cremation rite (nails were possibly used to help support the pyre structure, at least initially, or may

simply be background residual material); again their distribution across the cemetery seemed random.

Table 4.4. Details of pottery vessels in Cemetery I cremations.

Grave No.	Date Range	Form		Mucking	Other
25	AD 80/90–110/120	Storage jar	Poppy head beaker	1	1
26	AD 70–130	Flask		1	
27	AD 70–120	Narrow-necked jar		1	
39	AD 70–150	Storage jar		1	
40	AD 50/60–80/90	Storage jar	Beaker	1	1
42	AD 70+	Storage jar (truncated)		1	
59	AD 70–150	Narrow-necked jar		1	

Accessory vessels comprised the poppyhead beaker in Cremation 25, the carinated flask in Cremation 26, the large storage jar in Cremation 39, the beaker in Cremation 40 and the high-shouldered jar in Cremation 59; these five burials were evenly distributed across the cemetery, and all were of male or unsexed adults. Accessory vessels accompanying a jar in the Cemetery I cremations are confined to a solitary drinking vessel (in the case of Cremations 25 & 40). This represents a very limited selection from the range of vessels that would have been available, and may be significant in terms of either the date of the cemetery or the social identities of the individuals interred. Often, Romano-British cremation burials contain a fuller set of accompanying vessels: a ‘standard set’ comprising a flagon (as a liquid container), a cup or beaker (as a drinking vessel) and a platter or dish (as a food container) and presumably represented a Romano-British table setting, although this preference may not have developed until the second century AD (Philpott 1991, 35).

Just two burials, Cremations 25 and 40, contained both a cinerary urn and an accessory vessel; these are the only burials to contain more than one vessel, as accessory vessels in this cemetery are seemingly restricted in number to one per grave, if they are used at all. In these two graves, both vessels were upright in the grave pit, but not touching. Those in Cremation 40 had been pressed down into an apparently intermixed deposit of pebbles, dark earth and cremated bone fragments (?pyre debris); the cremation urn contained the bulk of the cremated bone, and was apparently supported in place by large residual Romano-British sherds.

Three burials were provided with a single unburnt brooch as a grave-good: Cremation 26 contained a Colchester derivative that had probably been placed with the cremated bone deposit; Cremation 27 had a disc brooch of *Tutulusfibel* type, found with that part of the cremated bone deposit which lay outside the urn, while Cremation 40 contained an asymmetrical plate brooch, which had been placed

inside the cremation urn. No apparent correlation with age or sex can be determined from the small data-set: Cremation 40 was identified as an adult male, Cremation 27 as an unsexed adult, and Cremation 26 a double burial of an adult male and a child. This pattern of single-brooch deposition is seen elsewhere in the later first century AD: six of eight cremations with brooches at Stansted (Havis and Brooks 2004, 251) had single brooches only, and all were of Colchester-type. Philpott (1993a) has argued that this represents continuity from Late Iron Age practice, citing the King Harry Lane cemetery from Verulamium (in use from c. AD 1–60; Stead and Rigby 1989) where a third of the 455 cremations have one or more brooches, but other forms of ornament are rare. Preference for brooches is also seen in later Iron Age rural cemeteries (Whimster 1981, 158). Philpott argues that from the Conquest there is a gradual increase in the number of grave-goods employed, especially in the more Romanised centres; he thus sees a fusion of Iron Age and imported Roman practices spreading over much of southeast England by the early second century (something which may also have been encouraged by the greater affordability of such items following the Conquest, with increased mass production).

Arrangement of Cremated Human Bone

The cremated remains were placed into the grave pits in a number of ways. A common practice, seen in Cremations 26, 27 and 59, was to set the cremated remains into the base of the pit, and to place any accessory vessels on top or to one side. In others, the cremated bone was found above and around the accessory vessel (Cremation 39), or mainly within the cremation urn (Cremations 25, 40 & 42). There are a few intriguing suggestions that in some cases the bones may have been deliberately arranged: the rib fragments placed in the centre of Cremation 26 were said to have been crossed (although this is quite likely to have been accidental); several large pieces in Cremation 56 were reported as ‘carefully arranged’ and some of those in Cremation 59 ‘partially sorted’. Deliberate arrangement of cremated remains is rarely reported from Romano-British burials, although some of the cremations at Skeleton Green were found to display deliberate selection of parts of the skeleton (usually post-cranial, but sometimes cranial) for burial in the grave (Wells 1981, 291). More recent excavations at Stansted (Havis and Brooks 2004) also reported later first-century cremations where the cremated bone was placed beneath the accompanying vessel; this may therefore represent a localised rural practice.

Table 4.5. Summary of burial attributes for Cemetery I inhumations. *Key to coffin data: NC = Nailed coffin; UC = Un-nailed coffin.

Grave No.	Phase	Sex	Age	Grave L.	Grave W.	Grave D.	Orient.	Coffin*	Coffin L.	Coffin W.	Coffin D.	Head to	Position	Headsails	Vessels	Other ornaments	Date
1	2	M	Adult	2.43	0.76	0.73	111	NC	1.95	0.56	0.23	USE	Supine Ext	5	1		AD 110/20-200/10
2	7	?	?	2.33	0.91	0.84	111	NC	1.85	0.48	0.23	?	?	?	0		?
3	2	?	Adult	2.31	0.79	0.61	148	NC	1.88	0.61	0.20	SSSE	Supine Ext		1		AD 150-250
4	7	?	?	2.45	1.07	0.55	125	NC	1.98	0.58	0.28	?	?	?	0	Bronze frags	?
5	7	?	?	2.18	0.91	0.56	46	NC	1.83	0.61	?	?	?	?	0		?
6	2	?	?	2.44	1.12	0.69	147	None	-	-	-	SSSE	Supine		0	Bracelet	AD 150s
7	7	?	Adult	1.83	0.61	0.46	147	NC	1.60	0.53	0.26	SSSE	Supine		0		?
8	2	?	?	2.26	0.91	0.26	303	NC	1.83	0.46	0.26	NW	Supine		1		AD 110/20-200/10
9	2	?	?	2.96	0.91	0.58	115	NC	2.19	0.53	0.26	USE	Supine	68	2	Handled item	AD 150-200/10
10	2/3	?	Adult	2.33	0.91	0.61	113	NC	1.90	0.46	0.23	USE	Supine Ext		2		AD 200-320/50
11	2	?	?	1.98	0.73	0.53	287	NC	1.83	0.30	0.30	WNW	L/Hs Flex	63	1	Bronze frag	AD 110/20-200/10
12	7	?	?	2.31	1.02	0.41	145	None	-	-	-	SSSE	Supine		0		?
14	2	?	?	2.00	0.66	0.40	287	NC	1.73	0.61	?	WNW	Supine	52	1		AD 150s
15a	3	?	Adult	2.51	1.07	0.79	115	NC	1.78	0.53	?	E	Supine	40	0		?
15b	3	?	Adult	2.51	1.07	0.81	115	UC	?	?	?	?	?	14+	0	Range	3rd-4th
17	2/3	?	Adult	2.24	1.22	0.63	292	NC	1.98	0.66	?	USE	?	53	2		AD 200-300s
18	3	F	Adult	2.29	0.91	0.46	340	NC	2.01	0.51	?	N	Supine Ext		0	Bracelets x 2	3rd-4th
19	3	?	Adult	2.24	1.22	1.22	105	NC	1.88	0.46	0.30	USE	?	2	1	Pin from brooch	AD 200/40-320/50
21	7	?	?	2.20	0.91	0.46	115	NC	1.70	0.51	0.20	USE	Supine Ext		0		?
22	7	?	?	1.78	0.61	0.53	147	None	-	-	-	SSSE	L/Hs Flex		0		?
23	7	?	?	2.21	1.22	1.22	120	NC	1.66	0.48	0.30	USE	Ext	55	0		?
24	7	?	?	2.33	1.01	0.61	?	NC	1.83	0.61	0.50	?	?	?	0		?
28	3	?	?	2.33	0.86	0.61	?	NC	1.22	0.38	?	?	?	?	1	Ring-headed pin	AD 250s

Grave No.	Phase	Sex	Age	Grave L.	Grave W.	Grave D.	Orient.	Coffin*	Coffin L.	Coffin W.	Coffin D.	Head to	Position	Headsails	Vessels	Other ornaments	Date
29	2	?	?	1.98	0.91	0.85	125	NC	1.52	0.40	0.23	USE	?		1		AD 110/20-200/10
30	3	?	Adult	2.43	1.32	0.51	125	NC	?	?	?	?	?	43	0	Bracelets x 2	3rd-4th
31	7	?	?	2.43	0.91	0.53	305	NC	?	?	?	WNW	Supine Ext	11	0		?
33	7	?	?	1.80	0.74	0.38	338	NC	1.60	0.43	0.32	NNW	?	24	0		?
34	2	?	?	2.43	0.79	0.84	122	NC	1.98	0.26	?	WSW	?	37	1		AD 110/20-200/10
35	7	?	Adult	2.28	1.22	0.56	130	NC	1.96	0.61	0.38	SE	?		0		?
36	7	?	?	2.36	1.14	0.86	160	NC	1.83	0.61	0.48	SSSE	Supine Ext		0	Coin	?
37	7	?	?	1.98	1.40	0.91	70	None	-	-	-	WSW?	?	1	0	Wood box?	?
41	7	?	?	1.79	1.02	0.56	283	None	-	-	-	W	?		0		?
43	7	?	?	?	?	?	?	?	-	-	-	?	?		?		?
45	2	?	?	1.98	0.84	?	80	?	?	?	?	E	?	12	1		AD 130-250
46a	7	?	?	2.28	1.07	0.68	118	UC	1.12	0.18	?	USE	?		0		?
46b	7	?	?	1.57	0.91	?	118	NC	1.22	0.61	?	USE	L/Hs Flex		0		?
47	7	?	?	0.91+	1.10	1.00	125	UC	?	0.56	?	?	?		0		?
48	3	?	Adult	2.36	0.96	0.61	313	NC	1.68	0.45	0.20	W	Supine Ext	48	1		AD 250-400s
49	7	?	?	2.74	0.91	0.61	118	UC	1.83	0.46	?	USE	?		0		?
50	3	?	?	1.49	1.17	0.74	285	NC	1.78	0.41	?	WNW	Supine Ext		3	Bronze frag	AD 250-350
51	7	?	?	1.68	0.81	0.70	124	NC	1.41	0.58	?	SE	R/Hs flexed		0		?
52	3	?	?	2.18	0.91	?	?	NC	1.83	0.38	0.61	SE	Supine Ext	54	1	Bracelets x 6 (x13)	3rd-4th
53	7	?	?	2.43+	0.91	1.00	120	NC	?	0.46	?	USE	?	41	0		?
55	7	?	Adult	2.21	1.22	1.07	284	NC	1.75	0.41	0.20	WNW	Supine Ext	61	0		?
57	7	?	?	2.13	?	0.46	?	None	-	-	-	WSW	?	43	0		?
58	7	?	?	2.40+	0.61+	?	?	NC	?	?	?	ENE	?	50	0		?
60	7	?	?	1.57	?	0.53	65	?	?	?	?	WSW	?	56	0		?
63	3	?	?	1.37+	0.61	0.46	65	None	-	-	-	ENE	?		2		AD 250-350

Grave No.	Phase	Sex	Age	Grave L.	Grave W.	Grave D.	Orient.	Coffin*	Coffin L.	Coffin W.	Coffin D.	Head to	Position	Headsails	Vessels	Other ornaments	Date
62	7	?	?	2.13	0.61	0.61	?	NC	?	?	?	?	Supine Ext		0		?
63	3	?	Adult	1.98	1.09	0.61	242	NC	1.73	0.46	0.26	ENE	Supine Ext	60	0		?
64	3	?	?	1.52	0.61	0.71	242	NC	1.57	0.56	?	?	?		2		AD 250s
65	7	?	?	1.75	0.84	0.76	265	NC	1.52	0.61	0.25	W	?		0		?
66	7	?	?	1.30	0.69	0.36	284	NC	0.86	0.53	?	WNW	?		0		?
67	7	?	?	1.73+	0.66	0.56	124	NC	?	?	?	WNW?	Supine Ext		0	Lead vessel	?
68	7	M	Adult	2.61	0.91	0.44	310	NC	1.88	0.54	0.21	NW	?	95	0		?
69	7	?	?	1.22+	0.61	?	306	NC	1.00+	?	?	W	?		0		?
70	7	?	?	2.13	0.76	1.07	125	NC	?	0.43	0.25	SE	?	46	0		?
71	7	?	Adult	2.13+	0.76	0.76	127	NC	1.52	0.61	?	WNW	?	?	0		?
72	7	?	?	?	?	?	?	?	-	-	-	?	?		0		?
73	7	?	?	0.97	0.53	0.18	143	NC	0.79	0.55	0.13	SE	Ext		0		?
74	2	?	?	2.01	1.02	0.61	304	NC	1.68	0.61	0.56	WNW	?		1	Bracelet	AD 110/20-200/10
75	7	?	Adult	1.83	0.63	0.30	304	None	-	-	-	WNW	Supine Ext		0		?
76	7	?	?	1.14	0.61	0.30	324	None	0.76	?	?	NW	?		0		?
77	7	?	?	1.98	0.84	0.61	140	NC	1.70	0.43	0.23	SE	?		0		?



Figure 4.26. Plan of Cemetery I showing inhumation body positions (upper); below, plan showing coffin usage.

Pottery Vessels in Cremations (Rosemary Jefferies)

With few exceptions, the pottery from the Cemetery I cremations is very ordinary. Most of the vessels were manufactured locally, probably at Mucking or in north Kent. The fabric and forms used show a very limited range. It is possible to identify distinct groups within the cemetery, reflecting the division of the cemetery into the earlier

cremation phase and the later inhumation phases. The pottery from the inhumations is reported on further below. Seven of the 10 cremations had associated pottery (Table 4.4); only Cremations 25 and 40 each had two vessels.

Truncated storage jars have been used as cremation urns, as at Mucking's other cemeteries (see below). It is a practice found on a number of Early Roman cemetery sites in the southeast. Storage jars often fracture on firing and are easily subject to breakage and could be readily available for reuse as cremation urns. The poppyhead beaker is probably a north Kent product, although a similar form was made at Highgate. The narrow-necked jars are local products.

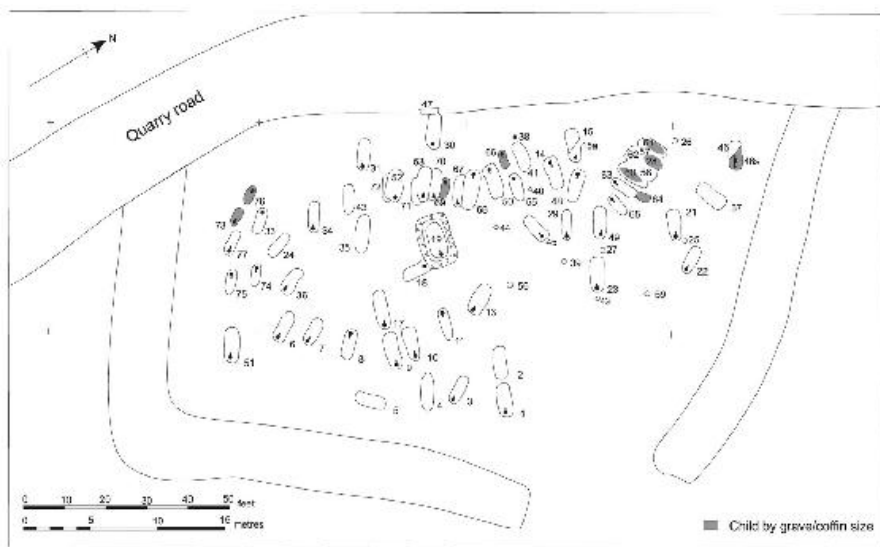


Figure 4.27. Plan of Cemetery I showing locations of probable and possible child burials.

Dating of the Cremations

Only one of the cremation burials had a stratigraphic relationship with another feature: Cremation 39 was cut into the terminal ditch of PG20, dated by associated pottery to the Middle Iron Age. Otherwise, these are discrete features, whose only dating comes from associated material; much of this is, however, well dated. Several burials cannot be independently dated: Cremations 38, 44 and 56 had no cremation urns, accessory vessels or accompanying gravegoods (other than items possibly represented by nails); Cremation 56 did have two Iron Age sherds in the fill, but these are presumably residual, as the cremation lies close to PG20. The remainder, though, had one or more associated

vessels (cremation urn, accessory vessel or both) and three also had a dateable brooch as a grave-good. The vessels and the brooch types provide a coherent date for the cremations in this cemetery of the later first to earlier second century AD; it is possible that all of these burials could fall within the later first century.

Burial Position

Generally, burial position within the Cemetery I inhumations was extended and supine (Table 4.5; Fig. 4.26). This was the case for the majority of graves where position could be determined: 21 out of 25 graves where the evidence for position was relatively clear; although five of these were tentative identifications). Three burials were found flexed on the left-hand side (Graves 11, 22 & 46b) and just one (Grave 51) on the right (position of the legs unclear). It may be significant that three of these graves were located on the outer margins of the cemetery (while still within the area enclosed by the reused Iron Age enclosure ditch): Grave 51 at the southern corner, and Graves 46b and 22 on the northeastern edge of the cemetery. The high number of graves where position could not be determined (38 in total), however, means that this cannot be established as a true pattern. It is interesting, though, that these side-lying burials were orientated more or less to the southeast; their position means that all would have faced 'into' the cemetery, rather than away from it.

Philpott (1991, 71) has pointed out that a significant minority of crouched or side burials in urban cemeteries are of children (this is seen best at the Lankhills cemetery at Winchester, where 5% of burials were laid on the right hand side, of which half were children; Clarke 1979, 138–42, table 10). Of the four side-lying burials in Cemetery I, none are securely aged, but two might be identified as younger burials by coffin size (Fig. 4.27): Grave 46b's coffin was just 1.22m long, while that of Grave 51 was 1.41m long; of course, it may have been the case that these burials were flexed on their side in order to fit them into a coffin that was shorter than the norm, or that ideas of appropriate coffin shape were more wide-ranging. Explanations put forward for adult flexed side burial include posture affected by illness (such as osteophytosis or arthrosis), or the continuation of flexed or crouched burial rites from previous periods on rural sites (*ibid.*). Alternatively, given the peripheral location of several of these burials in Cemetery I, it may have been a deliberate statement of difference by the mourners.

Grave Orientation and Depth

The cemetery saw two main orientations used for inhumations. Where the direction of the head in the grave could be determined, 38% (21 of 56 graves, of which three were earlier phase and four were later phase) had the head pointing between WSW and north, while 62% (35 graves, of which seven were earlier phase and four were later phase) had the head between ENE and SSE. No graves were orientated to points between NNE and NE, and none between south and SW. Of the 12 graves where head position could not be determined due to lack of staining, the general orientation of these fell into these two main orientations in all but one case (the exception is Grave 5, orientated NE–SW, placed on the periphery of the cemetery). Little difference was seen between the two orientation groups: those in the WSW–N range were slightly more likely to contain hobnails, while the use of unnailed coffins was only seen in the ENE–SSE group, and only adults were identified skeletally (although some small graves suggest that children may have been present). These orientations do not seem to be determined by date in a straightforward manner, although earlier phase graves were slightly more likely to be orientated with heads in the ENE–SSE range. The overall irregularity in grave orientation contrasts with the ‘controlled’ approach seen at many later urban Romano-British cemeteries, particularly those in use through the fourth century.

Table 4.6. Grave depths at Mucking compared with Lankhills.

Grave depth	Mucking Graves (No.)	Mucking %	Lankhills % Adults	Lankhills % Sub-adults
0–0.40m	10	18	13.7	28.2
0.41–0.80m	33	59	34.7	50.0
0.81–1.20m	11	20	39.3	18.8
1.21m+	2	4	12.3	3.0

Table 4.6 compares grave depths at Mucking Cemetery I with those at Lankhills (after Clarke 1979 and Booth *et al.* 2010). There does not appear to be any significant distributional patterning, although the deeper graves appear to be slightly more central to the cemetery. There may, however, be an age-related pattern, for no graves identified as potentially of children (by grave or coffin size) were over 0.8m in depth. The only two graves over 1.2m in depth were Grave 19 (with the surrounding enclosure ditch) and Grave 23 (a coffined burial with hobnails but no other grave-goods). Earlier phase graves were not significantly different in depth ranges to later phase ones.

Unusual Burial Rites

There was a single instance of possible decapitation in Cemetery I, although this is by no means certain. In Grave 68, a fragment of femur or tibia was reported both as lying 'across' the skull, and as being beneath the skull. This might indicate a decapitation of the type where the head is subsequently placed at the lower body (Philpott 1991, 78). If this is a true case, it is a relatively common rite in later Romano-British cemeteries, particularly in the fourth century, although by no means found in all cemeteries (*ibid.*, 78–9). Grave 68, an adult male, was interred in a nailed coffin and provided with hobnailed footwear, but no vessels or personal ornaments; this would be consistent with the furnishing of other examples of decapitations (*ibid.*, 80–1). It is, however, in a central location within Cemetery I, in contrast to the peripheral location of many decapitation burials. Yet decapitated burials are often strongly associated with better furnished or unusual graves (*ibid.*, 82–3), and the close proximity of Grave 68 to Grave 19 may be relevant here: both are obviously later in the sequence of burial, as Grave 68 cut Grave 67, while Grave 19 cut Grave 18. The elaboration of Grave 19, and its unusual coffin (see below) mark it out as special, as did its central location within the cemetery, and the apparently deliberate offset of the graves surrounding it. It should be noted, however, that Mould (below) argues for two coffin stains being visible in Grave 68; this may simply be a redeposition of bone from a disturbed burial.

Coffin Burial and Ironwork (Quita Mould)

Timber nails were recorded from 49 inhumation burials from Cemetery I (see [Fig. 4.26](#)). In a small number of graves the nails occurred residually in the grave cut (Grave 45 and possibly 76), but in the majority of these burials the nails come from coffins of nailed construction. Over 31% of the burials had between 20 and 33 nails present; only two (Graves 24 & 28) contained more than 50. It is estimated that at least 20 nails are required in the construction of a nailed coffin, to attach the side, end, and base boards and to nail down the lid. While nearly two thirds (65%) of the burials with nails contained less than this figure, the grave plans clearly show that the nails from these burials had been used in the construction of coffins. In some of these cases only part of the burial survived and in others not all the nails from a grave may have been recovered, but for others it is clear that differences in coffin construction can be observed.

The majority of the timber nails used in the construction of the coffins were flat-headed (Manning Type Ib, 1985, 134). While they varied in size, complete examples ranging from 28–132mm, most had nails from 40–80mm long. Coffins made with relatively small nails and those made of larger nails were apparent: Grave 73, for example,

had small nails varying in length from 30–45mm, while Grave 50 had nails of 67–100mm in length. One burial, Grave 19, was notable in having a coffin constructed with a small number of exceptionally large nails, described further below. While nails of larger size were associated with coffins using the lowest numbers of nails in their construction, coffins having many nails were not found to have used small nails exclusively. A tack, 19mm long with a head 8mm wide, was found with other nails in Grave 66; this is likely to have come from a small box or other wooden item.

Larger nails, 74–124mm long, with triangular heads of the same thickness as the shank (Manning Type II 1985, 135) were found along with nails of Type Ib in 16 of the burials. These Type II nails, designed so that the head could be driven deep into the wood and rendered inconspicuous, would appear to be an unusual choice in coffin construction and may suggest the re-use of timber salvaged from elsewhere. Nails of this type have been found in other Romano-British burials, occurring in 14 at Lankhills, Winchester (Clarke 1979, 333–6) and at Poundbury where they were found in 123 of the burials (12%; Farwell and Molleson 1993). Indeed, 39 burials at that site contained only nails of this type (Mills 1993), which may suggest their deliberate selection for coffin construction rather than being the result of the re-use of salvaged timber. A single large nail with a domed head (Manning Type 1a) was found in two burials (Graves 9 & 18); having no obvious structural use, these may also be best explained as being already present in timber salvaged from elsewhere. Nails with clenched shanks (i.e. shanks with a right-angled bend in their length) were noted in around half of the burials with Type Ib nails. These may also suggest the re-use of salvaged timber. Alternatively, it is possible that in some cases coffin construction had been undertaken in haste by those not particularly skilled at carpentry.

Study of the burial plans and the nails suggests that several coffin construction methods were employed. The majority of the burials had horizontally-aligned nails clustered at the four corners. These coffins appear to have had the end boards (at the head and foot) nailed to the sides of the base board and then the side boards nailed on using lap joints. The occasional vertical nails present, with their heads upward, result from the attachment of the lid. The number of nails used at the corners varied: the largest number observed was seven, but two, three or four nails in each corner were the most commonly found.

A smaller number of burials, at least eight examples being noted (Graves 4, 9, 19, 50, 51, 70, 73 & 74), had nails with their points recorded upward. In these cases it would appear that the end and side boards had been placed on the base board and the resulting butt joints

secured by nailing through the base. These two basic construction methods have been seen and described previously at the Eastern Cemetery, London (Barber and Bowsher 2000, 93–5). The coffin in Grave 19 was notable in being constructed with very large Type Ib nails, the one nail to survive complete having a shank length of 208mm and a head length of 40mm. The coffin had a single vertical and a horizontal nail at each corner (possible parallels are seen at Lankhills: Booth *et al.* 2010, 328). Grave 51, of similar two-nailed corner construction, used nails of more usual size (63–70mm).

Other burials lacked corner nailing (Graves 14, 21, 29, 31, 35, 48, 50 & 65), but instead had a small number of nails evenly distributed around the edge of the coffin or occasionally along the two end boards only. Where the nails were orientated vertically and are of relatively small size, it is suggested that they had been used to secure the lid (Graves 14, 21 & 65), implying that the coffins were principally of jointed and pegged construction. Similarly, graves with horizontal nails along the sides (Graves 29 & 35) are likely to have been of jointed construction, probably with a base board fitting into rebated side and end boards, with additional nailing to strengthen. Grave 50 differed in having a small number (16) of large nails (77–100mm long). Those that appear on plan run along two end boards only; this too would appear to be a coffin held together principally by a jointed construction.

Direct evidence of pegged coffin construction survived in one burial (Grave 9). A series of eight ‘wood knots’ were originally recorded amongst the Type Ib coffin nails from Grave 9; two further examples were recognised in 1984. The plan shows that these ‘wood knots’ were evenly distributed along each side of the coffin. Chiefly horizontal, two were found in a vertical position. The coffin was said to have had a depth of 12 inches (30cm). While one ‘wood knot’ was recorded on the plan as being at the base of the coffin, four others appear to have been above. The ‘wood knots’ of mineralised wood were 25–47mm in length and chiefly of round section; one appeared eight-sided. Wood joints were preserved on three. They would appear to be the preserved remains of wooden pegs or dowels used in the construction of the coffin. The excavators suggested that they had come from a coffin made of yew wood. While this is unlikely, as yew is chiefly used to make small items (N. Nayling pers. comm.), it is possible that the pegs themselves may have been made of yew, though pegs and dowels were commonly made of willow/poplar, hazel or young oak (J. Watson pers. comm.). The mineralised wooden pegs/dowels were sent to the Ancient Monuments Laboratory for analysis in 1984. Unfortunately, no report appears to have been made and, to date, the objects themselves have not been located.

Most Roman coffins were made of radially split oak, a small proportion being of ash or willow/poplar, usually sawn. The majority of the coffins in Cemetery I were made of oak: 90% of those whose wood was identified were found to be of oak, with only four examples being, or likely to be, of poplar (Graves 8, 18, 63 & 73). Jointing was observed on the nails within 36 (75%) of the graves with minerally preserved organic remains. Two burials (Graves 24 & 77) had as many as 13 wood joints preserved within each. There were 122 measurable wood joints present. While the thickness of wood preserved ranged from 6–50mm, the majority (81%) measured from 13–31mm, with nearly three quarters (74%) measuring from 15–30mm. The six joints preserved in one burial (Grave 68) were notably thicker than most, varying from 35–50mm and that on one nail suggested that the base board of the coffin was 35mm thick. Joints within others were thinner than average. Joints in one, Grave 73, apparently the burial of a child, suggested a coffin of ?poplar wood with boards 11–24mm thick; another had a coffin of oak boards of similar thickness (11–20mm; Grave 69). Six small nails, possibly from a box, were found at the eastern end of Grave 37. The remains of jointing were found on two of the nails. It was uncertain whether the full thickness or only part of the joint was represented, but taken on face-value the wood thicknesses of 6mm and 12mm represent the thinnest timbers at this cemetery. The nails may come from a small box made of particularly thin oak timber or, perhaps more likely, of rebated construction.

For the most part, details of the depths within the grave cuts of the individual nails are lacking and their orientations are sometimes ambiguous, so whether the coffin timbers were radially split or sawn cannot be confirmed. However, the range of the estimated thicknesses of boards within individual graves does suggest that radially split timber was used.

Where vertical nails were noted, it was possible to identify the nails that secured either the base board or the lid (unless the position of the nail head is given, one cannot be distinguished from the other) and here the difference in the thickness was marked. One burial had a base or lid of just 10mm thickness while the timber of other boards in the coffin was as thick as 28mm. Another burial had a base or lid 35mm thick (Grave 68), while a third appeared to have been 49mm thick (Grave 3). Grave 14 contained six nails whose position on the plan suggested that they had been used to secure a lid c. 17–20mm thick. While it is tempting to suggest that the presence of a joint just 10mm thick on a vertical nail indicates the use of a rebated base board, other explanations, such as the use of a thinner board for the lid, are possible. The use of thinner boards, the presence of the thinner end of

radially split timbers, or the presence of rebated joints cannot be easily distinguished with this level of recording.

Observation during excavation of soil stains left by the rotting timbers did provide good evidence for the original thickness of the coffin timbers. Soil staining from the wooden coffin was observed in 33 of the burials with iron present, two grave cuts having staining from two coffins visible (Graves 8 & 68). In some burials, like Grave 52 for example, the stain made by the rotted wooden coffin was clearly observed during excavation, but no nails were recovered. It may be inferred that the coffin had been constructed with joints, probably secured by wooden pegs (dowels), and that no nails had been used in its construction. Grave 29 had the clear stain of coffin wood along the side, top and bottom of the burial. Staining from an end board of similar thickness was observed during the excavation of Grave 24. The bottom of the coffin, the base board, in Grave 64 was observed to be c. 2ins (4.5cm) thick when excavated; this was thought to be narrower than the lid, which also showed as a distinct stain.

The detailed orientation of the individual nails was noted alongside the grave plans of four burials (Graves 35, 65, 73 & 74); however, the information that could be gained from these particular burials was limited by the number and condition of the nails recovered. Jointing on the 16 small nails recorded from Grave 35 suggested that boards 20–25mm thick had been used. Only five nails were recovered from the child's burial, Grave 66, and no distinct corner nailing could be discerned. Nails from another child burial (Grave 73) were also small, 30–45mm long, the eight wood joints present indicating that the boards of the ?poplar wood coffin had been relatively thin (11–24mm thick). Vertical nails with points upward suggested that the side and end boards had been nailed to the base board, which was 17mm thick. The orientation of the nails in Grave 74 showed a similar construction.

A single burial (Grave 46B) contained ironwork from a box interpreted as a broad box coffin. Though fragmentary, the remains of eight angled bindings (angled brackets), a square lock-plate and a stapled hasp were present. The angled bindings, straps of plano-convex section, 14mm wide, were nailed through the centre of each terminal with small nails 19–28mm in length. Other nails within the burial were also small, 45mm long or less, with the single larger nail recovered apparently deriving from Grave 46A, below. Six of the angled bindings had rounded terminals. One pair differed in having a rounded terminal at one end and a decorative terminal with a pointed tip at the other. A single angle binding was complete: one arm was 156mm long with a pointed terminal 19mm wide, the other, 106mm, with a rounded terminal 16mm wide. The other bindings were broken and their arm lengths varied, the longest being 220mm. The grave

plan shows that the angled bindings were attached horizontally to the corners of the box coffin. Minerally preserved wood was present on 10 nails, five binding arms and the lock-plate, wood joints being present on the terminals of two of the angled bindings. The wood preserved on one nail was identified as oak. The wood remains preserved on the arm of the complete binding indicated that the box had been constructed of boards (planks) c. 47mm thick. The style of angled bindings found here can also be seen amongst those used on the 10 examples of box coffins found at Poundbury (Mills 1993) but the types of angled bindings, the numbers employed and their position on the coffins of this type can be seen to vary both within a single cemetery and between Late Roman cemeteries (*ibid.*, fig. 90; Clarke 1979, fig. 43, 45; Booth *et al.* 2010, fig. 4.23). Minerally preserved wood on brackets from a single grave (Grave 846) at Poundbury was examined (Mills 1993, 114) and coffin planks of oak c. 50mm thick were suggested, comparable to the example here.

A small number of burials contained other items of ironwork. A ring-headed pin or possibly a split-spiked loop was found in Grave 28 and a fragment of nailed strap in Grave 50, both likely to have been attached to salvaged timber.

Of the patterns of coffin-use, Cemetery Ib saw a high incidence of such burial: of the 64 graves, as many as 47 had clear evidence of nailed coffins, while a further four displayed stains of unnailed coffins. In only nine burials was there no evidence that a coffin had been used. This represents a higher proportion than is usually seen: at Kelvedon, Essex, for example only 33 of 60 graves contained them (Rodwell 1988, 31), but here coffin-use declined into the later fourth century. The high levels of coffin-use in Cemetery I at Mucking may therefore reflect its relatively early date, with predominant usage in the later second and third centuries; there seems to be no difference in coffin usage between the Phase 2 and Phase 3 burials. More research is, however needed into historical patterns of coffin-use. At Butt Road, Colchester, Essex (Crummy *et al.* 1993), the small number of later third-century inhumations were uncoffined, whereas all 44 of the earlier fourth-century north-south inhumations and the majority of the subsequent major fourth-century cemetery employed coffins.

Grave Elaboration

In terms of grave elaboration, Grave 19 stands out. This grave, the deepest in the cemetery and one of the largest, was surrounded by an enclosure gully. Measuring 3.8m long by 2.9m wide, this tightly bounded the grave on all sides as it had no opening; it was straight-

sided, but pitted at the base, and was interpreted as the base for a hedge around the grave. Five examples of similar grave enclosures were reported at Lankhills, where they were also interpreted as the bedding for hedges (Clarke 1979, 183–5, fig. 20; Booth *et al.* 2010, 39–40, fig. 2.24). These Lankhills enclosures ranged in size from 3.4m by 2.6m (F38 around G408) up to 7.7m by 5.8m (F6 around G150). The Mucking example falls at the lower end of this size range, but it differs in not having an opening to the east, as all the Lankhills examples did. Similar features are known from Butt Road, Colchester (Crummy *et al.* 1993, 111–14), and at Kelvedon at Site G2 within the cemetery outside the northeast corner of the town (Goodburn 1979, 311); this was probably later fourth-century in date (Rodwell 1988, app. 1.B8). A further circular foundation trench at Kelvedon may have represented a walled structure around vaulted and coffined but otherwise unfurnished Grave 34, which was dated to the later third or early fourth century (Rodwell 1988, 51).

The individual placed within Grave 19 at Mucking was interred within a nailed coffin of unusual construction (see Mould above), and provided with a flanged bowl (dating from AD 200/40–320/50) as an accessory vessel. The burial was of an adult, with the head to the east. The five similar enclosures at Lankhills dated across the fourth century AD, and all enclosed coffined graves (although one was interpreted as a cenotaph, with no body but two dogs interred; the other bodies were supine and extended with heads to the west, southwest or northeast). This burial rite seems to have been a way of marking out important graves that was current throughout the fourth century at Lankhills (Clarke 1979, 183), and the same seems to be true at Mucking, with the proviso that Grave 19 may date to the third century, rather than the fourth century.

Generally, graves were discrete, suggesting that they remained marked in some way (presumably either by mounding on the surface or through the use of wooden grave markers). There were two areas of multiple graves, however, and five instances of intercutting graves. The multiple grave areas both lay in the west of the cemetery. The first group initially comprised Graves 53, 69, 70 and 71; none of these contained any independent dating evidence, but they may possibly have respected the area around Grave 19, which would place them into the later third or fourth century (see [Fig. 4.29](#)). This grave area is immediately adjacent to intercutting Graves 52 and 72 (although the later Grave 52 contained a Mucking Type dish that would place it into the earlier cemetery phase, its collection of bracelets suggests a later date). The first group is neighboured on the other side by intercutting Graves 67 and 68. Although lacking in dateable grave-goods or vessels, all these graves employed nailed coffins, and the later graves

in the sequence (Graves 52, 53, 68, 70 & 71) were all provisioned with hobnailed footwear.

The second multiple burial group lay further to the north, and comprised six inhumations (Graves 28, 57, 58, 60, 61 & 62), within a stratigraphic sequence (Fig. 4.22). Grave 62 seems to have been the initial burial, followed by Graves 57 and 58 and then by Graves 28, 60 and 61. There was some confusion on the part of the excavators as to the structuring of this deposit, but what is now interpreted as one of the latest graves in the sequence, Grave 28, produced a Much Hadham jar of the mid third century or later, while Grave 61 produced two vessels of a similar date range (and may in fact have been one of the latest graves in the cemetery as a whole). These two burial groups may, therefore, provide evidence for memory of burial location being preserved, and indeed revisited with further interments over the course of several decades; these might be characterised as burial plots, potentially reserved for members of a single family or household. The common alignment of the graves (even if orientation of the burials themselves differed) suggests that this coincidence of burial location is not happenstance.

Grave 15 saw the successive interment of two coffined burials within the same grave pit. Grave 15b was interred first, and was heavily disturbed by the later insertion of slightly shallower Grave 15a, which had the same alignment. Stains of both coffins were visible, but the initial Grave 15b was obviously heavily disturbed: human bone was found scattered, and a discrete group of hobnails was cut through by the subsequent interment. It is uncertain whether the first coffin burial was nailed, as only part of the coffin stain remained visible, but disturbed coffin nails within the grave fill suggest that it may have been. There may not have been much of a delay between the two burials, as the nailed shoes deposited with Grave 15b were still a recognisable shape (suggesting that the leather had not had time to decay before they were disturbed). Parts of the skull of Grave 15b were, however, found in two locations: near the head of 15a, and also near the feet, suggesting little reverence for the former burial. Both of these burials were of adults; the disturbed bracelet from Grave 15b may suggest that the initial burial in the sequence was female.

A similar pattern was seen in Grave 46, where Grave 46b (buried unaccompanied in a box coffin with angle brackets) was dug into the fill of Grave 46a, almost destroying it in the process. This body had a clear cut through a vertebra, such that the excavator suggested 'it must have taken place some years after the first burial when the bone was already soft'. Due to the poor bone survival, it is hard to judge the attitude of the diggers of the second graves in these two instances, in

contrast to a site like Lankhills, where the excavators were able to distinguish whether the disturbed bones had been reburied, collected and redeposited in the grave, or simply ignored (Clarke 1979, 187). More local parallels to this are known: at Slip End, Ashwell, the cemetery excavated in 1975 within a ditched enclosure contained a supine adult burial in one grave with the largely disarticulated remains of four other adults; all four skulls were carefully placed either side of the articulated skeleton (Burleigh 1976). Similar intercutting, but on a far wider scale, was seen at the California cemetery at Baldock (Burleigh 1993, 47–9; Burleigh and Fitzpatrick-Matthews 2010, 18), where there were 144 inhumation burials of the late third to fifth century, interred in just 70 separate graves. Many had been reopened to insert one or more subsequent burials. Their placing in rough rows, and postholes indicating wooden markers shows that care was taken over grave placement. Sometimes the bones of the previous occupant had been carefully arranged on the coffin lid of the next burial, or carefully packed around the sides. This site also provides a good parallel to Mucking Grave 46: a second body was inserted into an existing grave at Baldock within a large wooden chest with strap-hinges, slightly crushing the underlying skeleton.

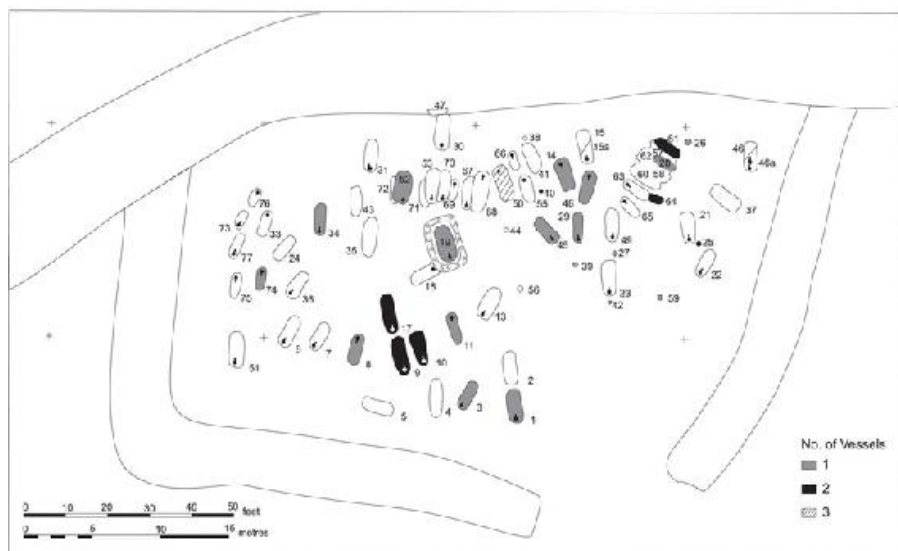
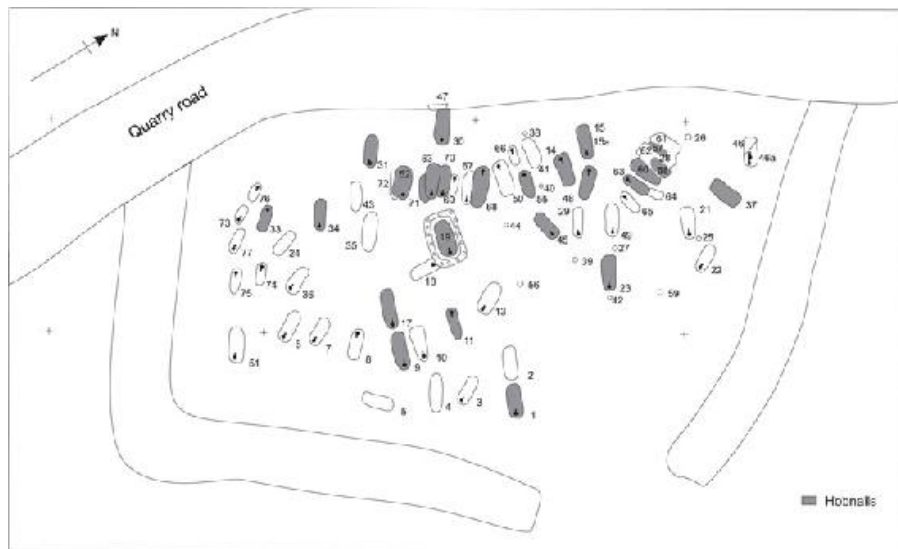


Figure 4.28. Plan of Cemetery I showing distribution of graves with hobnailed footwear (upper); below, plan showing numbers of vessels per grave.

Hobnailed Footwear (Quita Mould)

A single hobnail occurred residually in two inhumations (Graves 4 & 37); a further 25 inhumations contained shoes of nailed construction either worn by the deceased or placed separately within, or on top of,

the coffin (Fig. 4.28). No burial appeared to have more than a single pair of nailed shoes. It may be assumed that the number of hobnails recorded from each burial represents to some extent partial recovery, as being small they are easily overlooked. The majority of burials (17) with hobnails contained between 40 and 80 examples. While those burials with less than 20 hobnails were disturbed for the most part, the 11 hobnails recovered from Grave 31, where a pair of shoes was clearly visible as stains seen in excavation, may suggest shoes that were only lightly nailed. Grave 68, the burial of an adult male, contained 94 hobnails, with a double row of nailing visible during excavation. Such closely spaced nailing is a feature of shoes intended for heavy outdoor use.

The age of 12 of the burials containing nailed footwear could be determined, and all were adult. The stains from a pair of nailed shoes were visible in Grave 23 and measured 0.23m and 0.26m in length when recorded in the grave. While the equivalent modern shoe size can only be accurately calculated from a measurement of a complete insole, some idea of size can be gained from the measurements of the nailed outer soles that were observed. Falling between Adult Size 3 (35) and Adult 6 (39), it suggests that the individual buried was an adult. Only two burials could be ascribed to gender and both were male: Graves 1 and 68. It might be suggested that the two hobnail burials with copper alloy bracelets/armlets (Graves 30 & 52) were those of females (to judge by the gendered associations in other cemeteries with good bone preservation). In each case the bracelets had not been worn but had been separately placed within the grave. This is certainly the case for Grave 52, where a group of five bracelets had been placed, possibly within a basket, outside the coffin, with a single bracelet laid separately below the coffin. There may be cause for doubt with Grave 30, where no indication of the former position of the body or coffin survived. Two strip bracelets were found close by a group of hobnails at one end and, consequently, it was interpreted as the footend of the burial as there was no indication of the burial orientation. Notation on the grave plan, however, suggests that both bracelets were in intimate contact with fragments of bone; the smaller example was apparently worn on the body, as fragments of the bracelet occurred directly above and below the bone. It may be that the bracelets had been placed at the feet or perhaps had been worn around the ankles. Alternatively, the hobnailed shoes may have been placed by the arms rather than at the feet.

The hobnails occurred chiefly in clusters at the footend of the grave. It is assumed from this that the nailed shoes were worn on the body when buried. For most it is not possible to differentiate between the shoes having been worn on the body of the deceased and those that

had been placed separately in the coffin close to the feet. The excavators did suggest that a small number of shoes had not been worn, though they were located at the foot-end of the grave. Hobnails from a pair of shoes were found placed close to the left leg of the burial in Grave 14, along with a colour coat beaker. The hobnails were seen to be lying on their sides, indicating that the shoes had been positioned likewise. While the shoes suggest that the body had been lying on its side, the body stain was interpreted as showing that it had been supine. If not worn on a body laid on its side it is difficult to imagine how the shoes had adopted this position unless supported by some organic material that had left no trace. The position of the hobnails in Grave 55 suggested that one shoe had been resting against the end board of the coffin. The shoes in another grave lay, one in each corner, at the foot-end of the burial (Grave 48). The shoes may have fallen into these positions as the graves decayed. Shoes with hobnails recorded at differing levels may be the result of the decaying graves shifting and settling with time (e.g. Grave 33).

It was clear that in a small number of instances the nailed shoes had not been worn, but rather had been placed in the grave or laid on the lid of a coffin. In Grave 23 a pair of shoes appears to have been placed upside down, soles upward, in the coffin at the foot-end. Similarly a pair of shoes may have been placed sole uppermost at the head end of the burial in Grave 31. Six hobnails found above the knees of an adult male burial (Grave 1) may suggest that shoes had been placed on top of the coffin lid. It was also suggested that the shoes at the foot-end of Grave 63 had been placed on top of the coffin and not within.

The provision of hobnailed footwear is just as common in earlier phase graves (of the later second to mid third century) than in later graves: six of 11 of these contained them, as opposed to seven of 12 later phase graves. There were, however, 12 graves with hobnailed footwear that were not securely assigned to phase. These tended to be supine and extended (where position was observed) and were usually in nailed coffins, but with no accessory vessels; just one, Grave 17, had vessels, and could either be Phase 2 or 3. It may be that several of these graves with no accessories apart from nailed footwear belong to the latest phase of the cemetery, and run into the fourth century. This might suggest that in rural cemeteries the provision of hobnailed footwear was popular earlier than might be reflected in urban cemeteries like Lankhills and Butt Road, Colchester. At the latter site, none of the later third-century inhumations contained footwear, as opposed to 25% of the earlier fourth-century inhumations and less than 1% of the mid to later fourth-century graves (Crummy *et al.* 1993, 41, 145).

Ten of the burials with hobnailed footwear were also furnished with

pottery vessels: eight with a single vessel and two burials had two vessels. Although the majority of these belong to the earlier phase of burial, this may simply reflect a decline in the furnishing of graves in the later phases of the cemetery's use. Three burials with hobnails were provided with personal ornaments in the form of bracelets or bangles. In two cases, the bracelets were definitely or probably unworn (Graves 30 & 52, though see Mould above), and in Grave 15b the position of the bangle had been disturbed by a subsequent grave, and its original location could not be determined. This may, therefore, reflect the pattern observed at both Lankhills and Butt Road Colchester, where the provision of worn personal ornaments and hobnailed footwear were mutually exclusive (Clarke 1979, 157; Crummy *et al.* 1993, app. 1). It may, of course, be the case that unnailed (and possibly, therefore, finer) footwear was worn in, or deposited with, these burials.

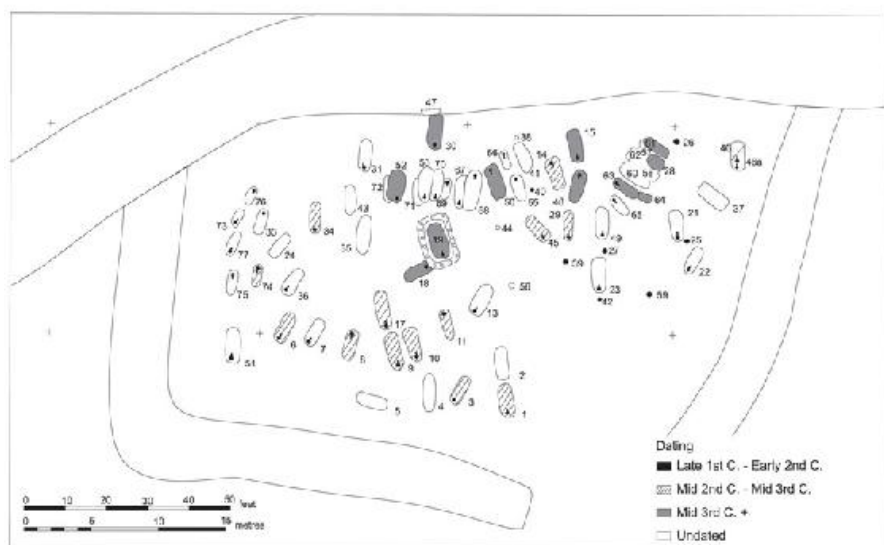
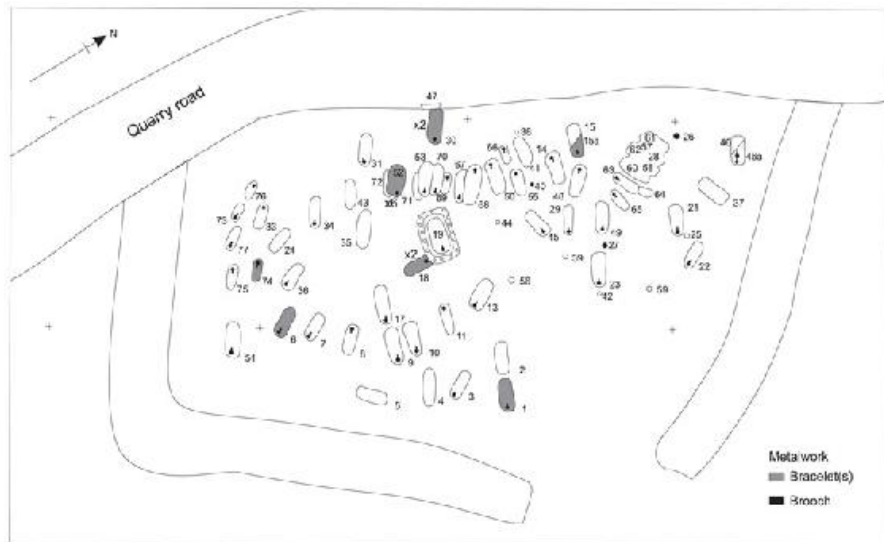


Figure 4.29. Plan of Cemetery I showing graves with personal ornaments (upper); below, plan showing dated graves.

The vast majority of burials with hobnails were coffined: 21 of the 25 burials were in nailed coffins, while a further example was in an unnailed coffin. This rate of 84% may contrast with the non-hobnail graves, where 76% were provided with coffins, but the difference is slight.

Vessels as Inhumation Grave Goods

Eighteen graves had pottery vessels as grave-goods (29%; Fig. 4.28). Of these, the majority – 13 – had just a single vessel, although five graves had two vessels and one grave (Grave 50) had three. Placement was varied: in two graves vessels were outside the coffin to the right, in eight they were at the left foot/knee, in two they were by the left of the head, in five they were at the right foot/knee and in two they were by the right arm/head. There is an obvious preference here for vessels to be placed at the foot-end of the grave, but position did not seem to be significantly affected by date. There is, however, a strong correlation between phase of burial and types of vessel deposited: earlier phase burials contained flasks and jars, while later phase burials contained beakers, flasks, dishes and bowls, in various combinations. The predominance of pouring and drinking vessels – 13 beakers and flasks, versus six dishes/ bowls and five jars – still shows a high proportion of serving and dining vessels when compared to Lankhills (Clarke 1979, 149–50), but this presumably reflects the chronological difference between the two cemeteries.

Inclusion of pottery vessels as grave-goods appears to have generally declined after the earlier fourth century (Philpott 1991, 80), a pattern that is certainly reflected at Lankhills, where 19%+ of graves dating to the earlier fourth century contained them, as opposed to less than 5% dating from AD 390–410 (Clarke 1979, 359). This is also seen at Butt Road, Colchester (Crummy *et al.* 1993, 268), where 27% of the later third-century inhumations, 45% of the earlier fourth-century inhumations and just less than 2% of the mid to later fourth-century inhumations contained vessels. Philpott (1993a, 176) argues that this is a decline seen across the course of the later Roman period; both in the number of vessels per grave and also in the number of furnished graves overall, especially in those areas which had seen a strong tradition of furnished cremation. He argues that, ultimately, the patterning reflects the breaking down of regional traditions and the development of a standardised later Roman burial rite.

POTTERY VESSELS (Rosemary Jefferies)

The pottery vessels from the inhumation graves fall into three main phases, described below (Phase 1 encompasses the cremation vessels, and Graves 10 and 17 cannot be securely assigned to phase, being either Phase 2 or Phase 3):

Phase 2 – Graves 1, 3, 8, 9, 11, 14, 29, 34, 45, 52 and 74 (AD 110/20–230/50)

The pottery in this second group was mainly manufactured at Mucking or in north Kent. The most common forms were hooked-rim flasks and narrownecked jars. Several vessels show signs of fire

damage. Both the flask from Grave 29 and the narrow-necked jar from Grave 34 are seconds. The colour coat Pentice moulded beaker from Grave 3 may be a Colchester product, but it is also a second. The colour coat beaker from Grave 14 is also a second: the rim is warped which could only occur during firing. The base is warped and reddened, damaged during firing and may have come from a more local source. Note, though, that the bracelets in Grave 52 mean this grave has been assigned to the subsequent phase.

Phase 3 – Graves 14, 19, 28, 48, 50, 61 and 64 (AD 230/50+) Within this group, Graves 19 and 61 have Mucking developed flanged-rim bowls. Most other vessels from this later phase have been imported to the site, including the unidentified vessels in Grave 64. Graves 48 and 50 have Oxford colour coat beakers, and in Grave 61 was an Alice Holt Flagon 8.12, a long-lived form. This form and Alice Holt storage jars usually have a coastal and riverine distribution. This could be the latest vessel in the sequence.

During the first and second century, the pottery from Cemetery I mainly comes from local sources and reflects the scale of local production. By the mid third century the pottery comes from a much wider area.

Other Grave-goods

Apart from pottery vessels, the item most commonly included as a grave-good in Cemetery I was the bracelet or anklet ([Fig. 4.29](#)). Three graves contained one, with two graves containing two (Graves 18 & 30), and a single grave had at least six (Grave 52). This proportion is in accordance with other cemeteries, which generally see well below 20% of burials so furnished (Philpott 1991, 136). Bracelets/ anklets can be grouped into those that were worn at burial, and those included specifically as grave-goods. Graves 6, 18 and 74 all appear to belong to the former group, as the ornaments were associated with the skeletal remains, or found in locations where skeletal remains might have been expected. The snakes-head bracelet in Grave 6 was found where the right arm might well have been in the grave, the anklet in Grave 18 was on the left leg, and the snakes-head bracelet was on the right side of the body near the hip (possibly on the arm), while the twisted bracelet in Grave 74 was in the area of the right shoulder. Grave 18 was an adult female, while the other two were unsexed and unaged, but in adult-sized graves. At Cemetery Ib the wearing of personal ornaments for burial seems to have been appropriate only for adult age groups, and was possibly female-related (although instances of males buried with worn ornaments are documented: *cf.* Philpott 1991, 144; all sexed burials at Lankhills with bracelets were, however,

female: Clarke 1979, 152; Booth *et al.* 2010, 297, table 4.26). The use of snakes-head bracelets in burials may suggest an apotropaic role for this ornamentation (Philpott 1991, 157).

The date range of burials with bracelets can be established by the characteristics of the ornaments themselves (all second–fourth-century), the associated pottery in Grave 74 (second- to early third-century), and by the stratigraphic position of the graves in the cemetery. Grave 18 was cut through by Grave 19's elaborate enclosure ditch, and Grave 19 was dated by its associated flanged bowl, which is late third to fourth century. There may be a chronological dimension to the fact that all three of these burials were located in the southern half of the cemetery. The wearing of personal ornaments in later Romano-British inhumation burials is a widespread but minority practice, more common in the fourth century than the third (Philpott 1991, 142, fig. 27), and forms a part of the funerary ritual (*contra* Clarke 1979, 152, who saw these as indicating careless burial). The early date for Grave 74 may, however, suggest that this pattern is not quite so clear-cut.

Unworn ornaments were found in Graves 30 and 52 (Grave 15b, with a single bangle, had been disturbed by Grave 15a, and the original location of the bangle cannot now be ascertained). The two bracelets or armlets in Grave 30 were both found near the group of hobnails at the presumed foot-end of the grave (though, see Mould above); these two ornaments were small, just 35–42mm in internal diameter, suggesting that they may have been intended for a child. The burial is, however, of an adult (albeit unsexed); the mismatch between the size of the bracelets and the age of the person interred is intriguing, and may suggest that such grave-goods were offerings rather than personal possessions, or perhaps that objects from childhood had been retained. The exceptional group of six bracelets from Grave 52 were found together, outside the coffin on the right-hand side, and may have originally been placed inside an organic container (indicated by a darker stain in their vicinity). This may have been of plaited reed or similar, as bracelet 52.8 showed clear traces of plaited material in its corrosion products. Several of the bracelets are now fragmentary and/or distorted in shape; it is not clear whether this damage occurred before or after burial. Grave 52 was unaged and unsexed, but interred within an adult-sized coffin. Again, these personal ornaments are all probably third- to fourth-century in date; Grave 52 contained a mid second- to mid third-century vessel with a post-firing graffito as a grave-good – could this have been old when buried? Deposition of personal ornaments outside the coffin is unusual. At Lankhills (Clarke 1979, 152, fig. 51) this was seen in just one grave, Grave 250, where a collection of items at the foot-end of

the coffin was probably contained within a wooden box. A parallel for Grave 52 is seen at Wycombe, where a child was buried with a pile of eight bracelets by the hand; this dating to after AD 350 (Clarke 1979, 361). A more recent example is now known from Prickwillow Road, Ely (Atkins and Mudd 2003) where Burial 10, a woman aged 22–7, had five intertwined bracelets (one of shale, three of copper alloy and one of iron and copper alloy) buried, probably in a bag, behind the head; this grave was dated to the mid third to early fourth century. At Pepper Hill, Kent, however, a grave with three unworn bracelets and an elaborate necklace was dated to AD 190–230, although noted as being extremely unusual for that period (Booth and Cool 2006, 31).

The deposition of unworn ornaments in graves is a welldocumented later Romano-British burial practice, often one associated with younger female burials (Philpott 1991, 147; Crummy *et al.* 1993, 136–41). This is predominantly a fourth-century practice, and the Mucking examples may therefore be early in the tradition (Grave 52 is also unusual in having the ornaments placed outside the coffin, rather than within it; *ibid.*, 148). Mucking Grave 52 did, however, have hobnailed footwear inside the coffin at the foot-end, which may indicate that the body was dressed at burial (if this was not simply placed in the grave); this creates further interest as to why the bracelets were not worn. Macdonald (1979, 410–12) has suggested that such collections of ornaments, paralleled as they are by the offerings seen at shrines and temples, may have represented ritually appropriate gifts to the deities for those who had died prematurely through disease or in childbirth (hence explaining their strong association with young female burials). Green (1982, 70) puts forward the alternative suggestion that such collections represent symbolic dowries, denoting the marriageable status of the dead girl. The reality is undoubtedly more complex, but age- and sex-appropriate grave furnishing, combined with gradations of status or rank and marital status may account for much of the patterning seen. It may also be a reflection of settlement type: Philpott (1993a, 175) notes that unworn deposits tend to occur in urban or small town cemeteries, while simple worn ornaments are as common in the countryside as in the towns. The adoption of the ‘unworn’ tradition may represent the spread of urbanised practice into the countryside.

No other identifiable objects were included as gravegoods, although three other graves had unidentifiable bronze fragments, and one contained a possible bronze binding. It is slightly unusual for a mid to later Roman inhumation cemetery that no burials were furnished with coins as grave-goods (the LIA potin in Grave 36 was undoubtedly residual, as it lay outside the coffin in the grave fill). At Lankhills these were commonly found in or near the mouth/head or in the

hand, and at that site it is a rite lasting over the course of the fourth century (Clarke 1979, 158, 166, fig. 13); it was, however, commoner after AD 370, and it may be that the Mucking cemetery did not last long enough into the later fourth century for this practice to be adopted. It is also slightly unusual for there to have been no personal equipment included as grave-goods: at both Lankhills and Butt Road Colchester, a variety of items were included, such as knives, strike-a-lights, spindlewhorls and combs. This may, again, reflect on the chronology of Mucking Cemetery I, as at these other sites such items were sparse until AD 350, after which they saw a sharp rise in use (Clarke 1979, 178; Crummy *et al.* 1993, 146, 154–5).

As a group, the Cemetery I cremations are rather homogenous. In contrast with other contemporary late first- to second-century cremation cemeteries such as Owlesbury (Collis 1977) and Broughton (Atkins *et al.* 2014), which display a spectrum of grave furnishing (ranging from two up to 12 or more vessels per burial), or the rich burials found around Winchester (Millett 1987, 67), the cremations in Mucking Cemetery I were generally only provided with a single cremation urn or accessory vessel; just two burials had both. The closest parallels, in terms of limited grave furnishing, are seen from other small rural cemeteries, such as those from West Kent and Surrey analysed by Philp (1973, 94–101, 108). These date from AD 50–120, and, like cremations in Mucking Cemetery I, tend to be single urn cremations with perhaps a single accessory vessel alongside. Similarly, at Kelvedon in Essex, of 28 cremations, nine were unenclosed and 12 had just a single cremation urn or accessory vessel (Philpott 1991, table 10). At Baldock, differential furnishing is seen between cemeteries, with some seeing far higher proportions of unenclosed or poorly furnished cremations than others (Philpott 1991, 33; Burleigh 1993). At a ratio of close to one vessel per

cremation, Mucking Cemetery I is rare in the southeast of England: most cemeteries have ratios exceeding 2.0 (*ibid.*). This does not appear to be purely chronological. While contemporary cemeteries in Essex at Strood Hall and Stansted Airport (Timby *et al.* 2007; Havis and Brooks 2004) have some unurned or single-vessel cremations, they both also have a significant number of more elaborately furnished graves, even in the later first century AD. The homogeneity seen in Mucking Cemetery I's cremations may therefore be an indication of the relative social status of its burying community at this time.

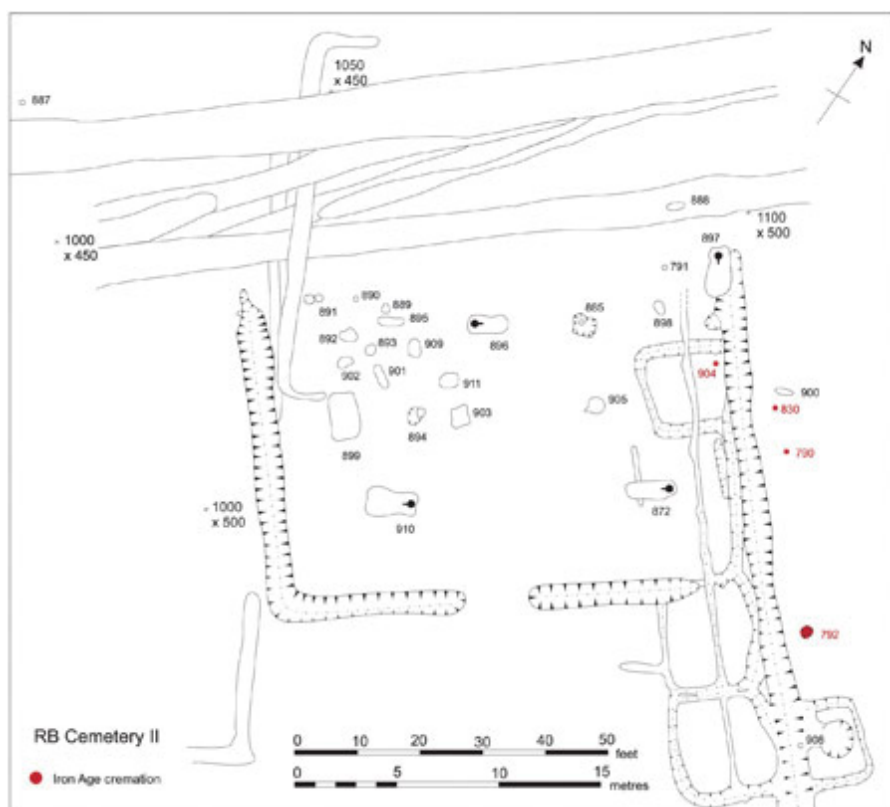


Figure 4.30. Plan of Cemetery II, with preceding Iron Age cremations shown in red.

On excavation, the inhumations of Cemetery I were generally assumed to belong to the mid to later Romano-British period: although occasional first and early second-century inhumations are found in urban and rural settings (particularly of children), inhumation as a dominant rite emerges in Britain by the mid third century (Philpott 1991, 53). There are exceptions to this, however. A number of recent excavations in East Anglia have revealed later Iron Age or earlier Roman inhumations (both adults and younger individuals) and within rural settlements a wider range of burial rites was obviously practised: examples known now include Addenbrookes in Cambridge, Duxford, Cambs. and Wallington Road in Baldock, Herts. (Evans *et al.* 2008; Lyons 2011; Burleigh 1993, 47; Burleigh and Fitzpatrick-Matthews 2010). At Mucking, several of the graves clearly predate the mid third century, and inhumation was obviously an acceptable burial rite in Cemetery I at Mucking from perhaps as early as the earlier second century. The high incidence of coffin burial, and the deposition of hobnailed footwear indicate that these are not predominantly fourth-century rites, but simply part of the Romano-British inhumation burial rite, both early and later (Fig. 4.29).

Some light can perhaps be shed on the question of how long this cemetery remained in use. At Lankhills, Clarke (1979, 173) noted trends in grave furnishing: graves with vessels were common until c. AD 350, graves with unworn personal ornaments c. AD 350–70, and graves with coins after c. AD 370. Similar patterns were observed at Butt Road, Colchester (Crummy *et al.* 1993). At Mucking Cemetery I, we

have no graves with coins, and just three with unworn personal ornaments: two of these are, however, undated, except for the generic dating assigned to the bracelets themselves. Also, Grave 52 is rather ambiguous in its dating, with its second- to third-century pottery, but collection of bracelets that most specialists would assign to the later fourth century or even later. This appears to be a cemetery in fairly intensive use until the end of the third century, with perhaps only sporadic use after that. Good candidates for later burials would be possibly Graves 15b and 30 with multiple-motif bracelets, and Graves 48 and 50, with their Oxfordshire colour coat beakers (indeed, one might even argue that the latter two could have been contemporary with the earliest Anglo-Saxon activity on the site, given the arguments about the dating of these vessels outlined in the previous chapter). Other burials of this latest phase were perhaps coffined and/or furnished with hobnailed footwear, but otherwise unaccompanied. There was no obvious overlap with the preceding cremation burials and there could easily be a fifty-year gap before the main period of inhumation burial, although this could, of course, have been occupied by some of the many unphased burials.

This cemetery is clearly not a later Roman ordered cemetery (as defined by Philpott 1993b). These are characterised by graves laid out in rows, usually with a west–east orientation and heads at the west end of the grave. They have very low levels of furnishing and the burials rarely intersect; often they are established within existing enclosures as *de novo* foundations. Wellknown examples include Lankhills, Winchester

(Clarke 1979), Period 2 at Butt Road, Colchester (Crummy *et al.* 1993) and Poundbury Cemetery 3, Dorchester (Green 1982; Philpott 1993b, 414, table 1 lists a number of other, often poorly published, examples). Such cemeteries are also known as 'managed' cemeteries (after Thomas 1981, 232). They are not necessarily Christian, but are a regular feature of the late Roman urban landscape. In contrast, inhumation cemeteries of the later second to early fourth century will often lack an agreed alignment, especially when their origins lie in a cremation cemetery. A significant minority of graves will be furnished and grave intercutting will be frequent (Philpott 1993b, 414–6). Even into the later fourth century, there is still a degree of variation: in urban settings, burials continued to be made in 'backplot' locations, away from organised cemeteries, and some existing cemeteries, such as Site J at Kelvedon, continued in use (and even maintained the cremation tradition; *ibid.*). Philpott suggests that the difference between the two types of cemetery depends on who controls the burial rites, postulating the rise of semiprofessional undertakers in some urban settings (*ibid.*, 417), who took over the organisation of the burial rites from the friends and family who would have made the decisions previously (and whose varying influences may therefore account for much of the variation seen).

Cemetery II

Excavated over the autumn and winter of 1972– 3, Cemetery II contained 11 definite or probable

inhumations and 14 cremations, plus Cremation 911, which contained no surviving human bone and may represent the remains of a ritual feast, rather than a cremation burial as such ([Fig. 4.30](#); see below).

Confined to the southwest quadrant of the Central Enclosure, the cemetery overlay and cut a sequence of NW–SE-orientated small square-barrow settings, of a type matching a group at the north end of the Central Enclosure and which were dated by associated cremation burials to the later Iron Age (see [Chap. 1](#) and the Prehistory Vol.). The cemetery lay within a square enclosure (ditches A7A, A8A, and a smaller northern ditch truncated by ditch A6A) measuring 22.4m by 17.9m and orientated NE–SW. The enclosure had a southeast-facing entrance, 2.8m wide, with ditches varying in width between 1.57m and 0.43m (averaging 1.0m) and between 0.41m and 0.3m in depth (ave. 0.37m). The western edge of the enclosure was delineated by the internal ditch of the Central Enclosure and by a margin, c. 1.5m wide, devoid of archaeological features. This margin may represent the location of a bank created from ditch upcast, and subsequently levelled, which was extant when the cemetery enclosure was created. Little dateable material was recovered from the ditch fills of the enclosure, but a Curle 11 sherd (Cat. No. 2398) was retrieved from the western end of ditch A8A dating from the later first to earlier second century AD; a Drag 18 sherd (Cat. No. 377) recovered from ditch A6A close to Grave 897 may be residual. Ditch A6A did, however, produce a larger assemblage of later first- to mid second-century pottery. The distribution of the graves (particularly those earlier in

the sequence) suggests that the cemetery may have initially been demarcated, perhaps by a hedge-line or other feature running across the enclosure.

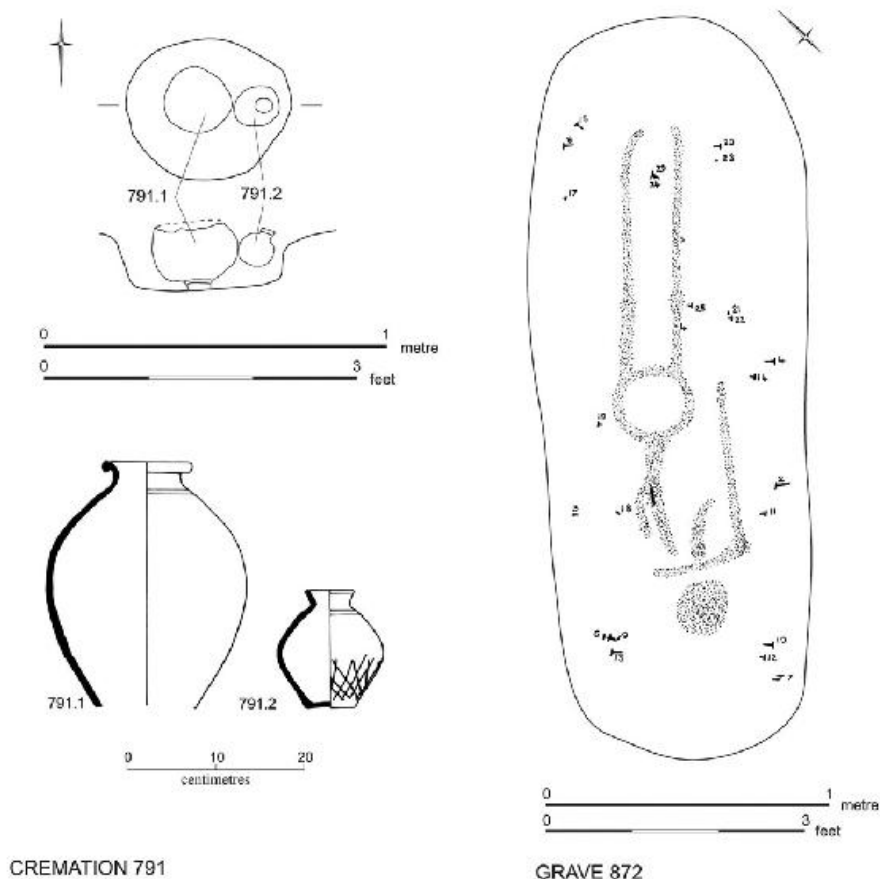


Figure 4.31. Plan and grave-goods from Cremation 791, and plan of Grave 872.

Both burial rites present in Cemetery II see a good deal of variation. Among the cremations, both urned and boxed cremations are in evidence, as well as the use of vaults, with a variety of vessels and other artefacts used as grave-goods. The inhumations display less divergence, but see nailed coffins

employed for some burials, and, again, enough variation in their grave-good furnishings to make discussion worthwhile, particularly with regard to age-related patterning. The cremations will be discussed first, before progressing to consider the inhumations, and then the overall development and social significance of the cemetery, located as it is within the main Romano-British settlement enclosure.

Grave Catalogue

Cremation 791. (1084N/502E) Adult Male and Adult Female (Fig. 4.31)

NB 164.60–1

Grave pit: Circular, with steep sides and flat base; measuring 0.91 × 0.8 and 0.48m deep. Vessel 791.1 found inverted with its rim on the base of the pit, and was used as the cinerary urn. 791.2 contained a dark fill, but no visible finds.

Pit fill: Clean, soft sand and ‘few pebbles’; no cremated bone in fill; oak charcoal.

Grave-goods:

791.1 Oval-bodied, narrow-necked jar in GRY fabric with stabbed decoration on shoulder and slight cordon below neck with two or three incised lines. Kiln product: a second, with signs of burning, possibly from pyre. Base and lower part of the vessel ploughed off (Ht 280mm+; Rim 92mm; Max girth 230mm; EVE 1.0). This type of narrow-necked jar is a long-lived form AD 120/30–250; Chelmsford AD 160–200; London Form 2 T Cam 231 B. This form was made at Mucking (FA01).

791.2 Small, globular narrow-necked jar with everted rim. GRY fabric; slight cordon on top of shoulder with concentric incised lines. Kiln waste, indicated by two areas of spalling, plus a hole on the body that was the result of spalling; poorly made with evidence of post-firing exposure to fire. There is crude burnished lattice on the lower half of the body (Ht 134mm; Rim 46mm; Max girth 130mm; Base 46mm; EVE 1.0). Mucking product (CL01). Placed upright next to 791.1. AD 170/90–210/30.

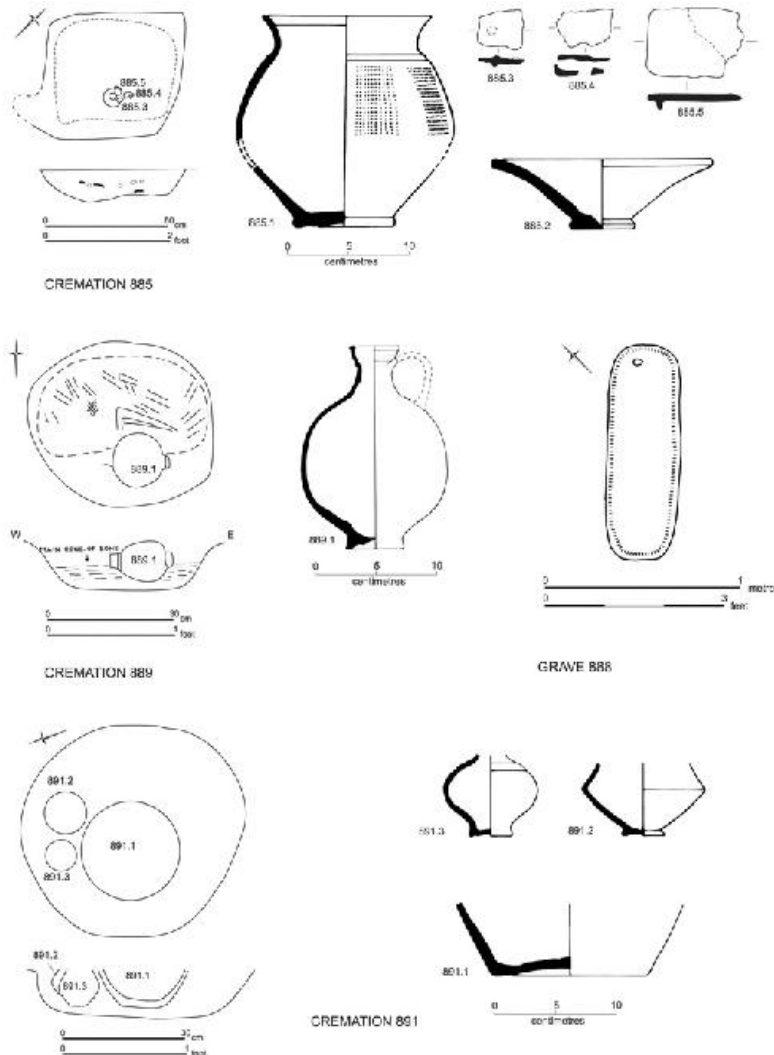


Figure 4.32. Plans and grave-goods from Cremations 885, 888, 889 and 891.

Bone: Large number of bones in 791.1, ‘some quite large’. Soil sample from both pots retained. Both sets of remains had good preservation, incomplete burning, and were white in colour. Max L. 78mm; 1300g in total.

Grave 872. (1065N/532E) (Fig. 4.31)

NB 209.47

Grave pit: Straight-sided, with rounded ends, near-vertical sides and flat base, orientated NE-SW. 2.59 × 0.97 × 0.46m deep.

Pit fill: Contains well-worn RB sherds by the left leg (possibly a grave-good, described as 872.1 below); no other data.

Grave furniture: Very poor stain of nailed coffin (wood unidentified) with 25 nails recovered. Dimensions 1.83 × c. 0.61 × c. 0.28m deep.

Grave-goods:

872.1 [Not illu] Remains of small globular jar with hollow rim in GFN fabric. Lower body and base missing (Rim 20mm, EVE 1.0). Mucking Kiln product. Found by the left foot inside the coffin. AD 120/30–250.

Bone: Clear body stain indicates supine extended burial with head to NE (not to SW, as indicated on Site Atlas) facing up, with head and shoulders over to the right side of the coffin, and left arm over body. Size indicates an adult.

Cremation 885. (1068N/504E) Adult (Fig. 4.32)

NB 209.53, 209.58–9, 209.62–3

Grave pit: Sub-square pit with sloping sides and sloping base, measuring 0.70 × 0.61m and 0.15m deep.

Pit fill: Medium brown loam, with few pebbles and patches of clayey loam.

Finds in fill: Glass, flint, possible imitation *Terra Nigra*; iron nails may suggest the former presence of a casket or box.

Grave-goods: Two accompanying pottery vessels, iron plate fragments and possibly glass vessels.

885.1 Poppyhead beaker with everted rim in GFN fabric (NM07). Differential firing indicates kiln waste; orange interior. Monaghan 2A2–4 Upchurch. AD 80/90–160.

885.2 Lid in GRY fabric. Mucking/local product. No exact parallels but similar forms in the Thames Estuary (Broomhey and Upchurch) and London have date range of AD 70–140. This may have been placed over 885.1.

885.3–5 Riveted iron plate fragments, lying over ?lid. 885.6 Several fragments of glass (both from a blue-green prismatic bottle and devitrified colourless scraps) suggest fragmentary grave-goods.

Bone: Possible burnt bone and teeth fragments found. Poor preservation, complete burning, white in colour, 5.2g, max L. 21mm.

Cremation 887. (1002N/427E) Adult Female [Not illu]

NB 195.78

Grave pit: Circular pit, 0.48m in diameter and 0.22m deep, with near-vertical sides and flat base.

Pit fill: Oak charcoal.

Grave-goods: None.

Bone: Poor preservation, complete burning, white in colour, 600g, max L. 45mm. Teeth comprise three roots and two other tooth fragments;

may all be incisors. Adult.

Grave 888. (1090N/493E) (Fig. 4.32)

NB 209.34

Grave pit: Rectangular grave with rounded corners, measuring 1.07 × 0.42m; depth unknown, orientated NE– SW. Cuts fill of inner Central Enclosure ditch.

Pit fill: Dark fill; no other data.

Grave furniture: Staining indicates unnailed wooden coffin measuring 1.02 × 0.38m (depth unknown).

Grave-goods: None.

Bone: None. Size of grave suggests a child.

Cremation 889. (1040N/484E) Adult Male (Fig. 4.32)

NB 209.18, 72; 220.121

Grave pit: Circular pit measuring 0.46m in diameter and 0.15m deep, with sloping sides and flat base.

Pit fill: No data. The flagon lay on its side over and within a layer of cremated bone.

Grave-goods:

889.1 Ring-necked flagon in VRW fabric (Ht 161mm; Max girth 121mm; Rim 36mm; EVE 1.0). The handle is missing. Marsh and Tyers 1.B.7 AD 120–160. These occur at Skeleton Green, Herts., North Kent and London.

Bone: Poor preservation, incomplete burning, white in colour, 1150g, max L. 63mm.

Cremation 890. (1037N/481E) Adult [Not illu]

NB 209.72; 220.121–2

Grave pit: Small pit cut into loose gravel, damaged by ploughing.

Pit fill: Grey-brown [earth] fill.

Finds in fill: One possible iron nail.

Grave-goods: None.

Bone: Poor preservation, complete burning, white in colour, 870g, max L. 23mm. Teeth comprise fragments of altered enamel, one being a four-cusped molar, perhaps upper M3, no dentine remains. Adult.

Cremation 891. (1032N/478E) Adult Male (Fig. 4.32)

NB 209.85, 220.121–2

Grave pit: Not well defined. Roughly circular, 0.53m in diameter and at least 0.15m deep, cutting an IA pit (1030N/478E).

Pit fill: No data. Main cremation vessel and two accessory vessels all placed upright in pit.

Grave-goods:

891.1 Storage jar in GVC fabric, truncated. Lower part of body and

base; used as cremation urn. Very poorly made local product, AD 70–300+.

891.2 Carinated bowl. Mucking product (OD??). AD 50/60–110/20.

891.3 Small globular, narrow-necked jar, with a plain cordon near the neck. Mucking product (KB02), AD 110/20–80/90.

Bone: 700g recovered, with cremated bone noted as inside all three pots. Max length of fragments, 49mm. Poor preservation, complete burning, white in colour.

Cremation 892. (1033N/485E) Adult Male. Cremation 892a. Adult Female (Fig. 4.33–4)

NB 220.121–2

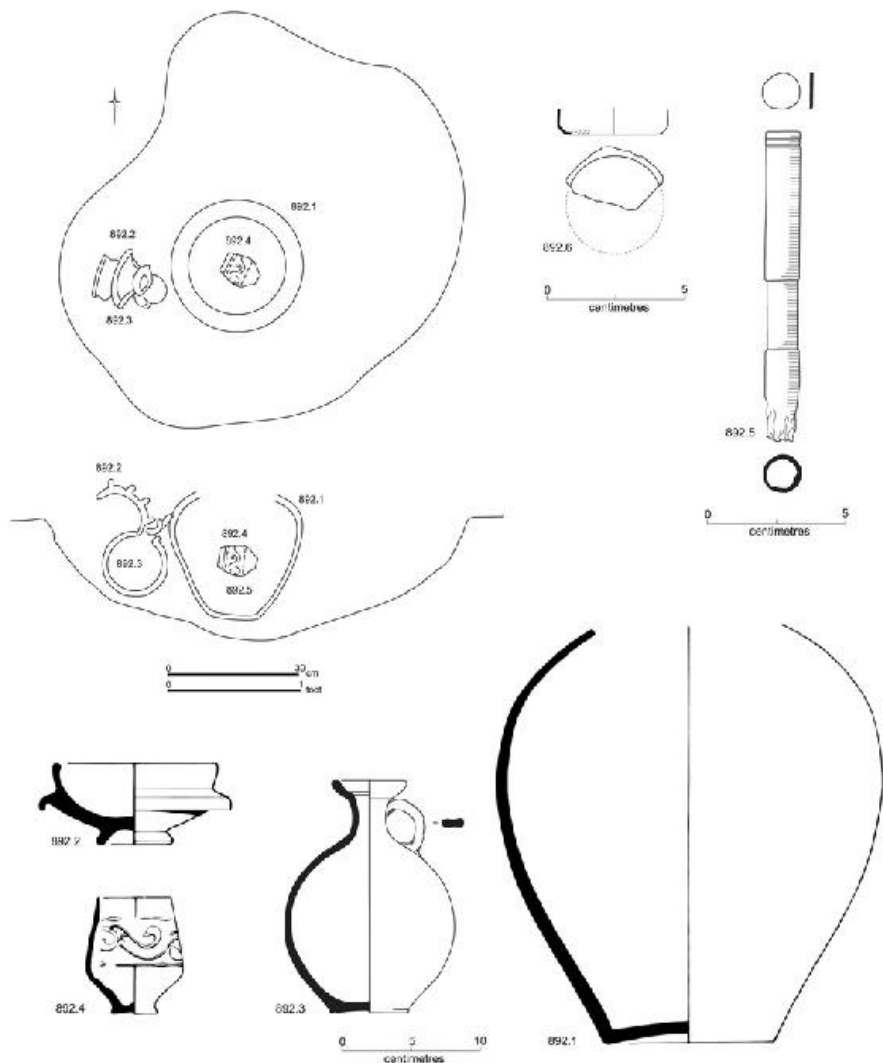


Figure 4.33. Plan, section and grave-goods from Cremation 892.

Grave pit: Oval, nearly circular pit with unclear outline 0.91m in diameter, and 0.38m deep.

Pit fill: Not stated. Cremation urn 892.1 placed upright in base of pit, with beaker 892.4 within it, lying on its side, along with unburnt bronze tube 892.5.

Grave furniture: Three iron nails found in the grave fill, probably residual or from a bier. Urned cremation with three accompanying pottery vessels and a glass vessel. Two further burnt nails from the fill inside the cremation urn.

Grave-goods:

892.1 High shouldered storage jar in GVC fabric, truncated at base of neck; very poorly produced. Used as a cremation urn. Local product (similar to 891.1) AD 70–300+.

892.2. Drag 38/Lud Si (complete, Diam. 13cm), EGR. Unstamped; first half of third century. Worn foot. Found next to the cremation urn.



Figure 4.34. Photograph of Cremation 892.

892.3 Single-handled, ring-necked flagon. Perhaps of local origin (LE03). AD 120/30–180/200. Found next to the cremation urn.

892.4 Plain rimmed bag-shaped beaker decorated with floriate scenes *en barbotine*. Probably of Nene Valley origin. Date c. AD 190–240 (for the form, cf. Howe *et al.* 1981, fig. 5.44–5). Found inside the cremation urn.

892. 5 Copper alloy ‘tube’, consisting of three parts: the two ends being of the same diameter, and fitting over the middle section. L. 111mm; max Diam. 14mm. Possibly a portable probe case. Found inside the cremation urn.

892.6 Part of the base and side of a clear devitrified glass vessel (Base Diam. 40mm). Scarcely worn. Concave base, quite narrow. Plain body, either straight-sided or slightly conical, possibly a flask.

Bone: Both sets of remains display poor preservation, complete burning, white in colour. Male: 1150g, max L. 74mm. Female: 492g, max L. 11.5mm.

Cremation 893. (1035N/490E) Adult Male. 893a. Adult Female (Fig. 4.35; not planned in field)

NB 220.121–2

Grave pit: Circular, outline indistinct.

Pit fill: Not stated. Cuts pit 1036N/503E.

Grave furniture: Urned cremation. Cinerary urn contained one further pottery vessel alongside cremated bone.

Grave-goods:

893.1 Truncated storage jar in GVC fabric, high shouldered as 891.1 and 892.1. Used as cremation urn (Ht 216 + mm). Local product, AD 70–300 + . An associated rim probably belongs to another vessel.

893.2 Miniature everted rim jar with burnished lattice in GRY fabric (EVE 1.0). Thames Estuary form (EA02). AD 120/30–250.

Bone: Both sets of remains display poor preservation, complete burning, white in colour. Male: 920g. Female: 260g, max L. 34mm.

Cremation 894. (1037N/503E) Adult Female (Fig. 4.35)

NB 209.83–4, 91

Grave pit: Roughly circular, measuring 0.61 × 0.58m, with a rounded profile, at least 0.25m deep; disturbed by ploughing. Cuts pit 1036N/503E. Bones in cremation vessel, which lay at a slight angle some distance above the base of the pit.

Pit fill: Charcoally margins, main fill sandy gravel, less pebbly than 1036N/503E pit.

Finds in fill: Amphora sherds, fire-cracked flints and body sherds, thought to be residual and from back filling of pit into which Cremation 894 is cut.

Grave-goods:

894.1 High-shouldered jar with hollow foot-ring in ?GVC fabric. Very poorly made. The upper part of the vessel has been removed, and the vessel fire-damaged postmanufacture; the surface is crazed and discoloured. Local product. AD 50/60–180/90.

Bone: Poor preservation; complete burning; white in colour; 27g; max L. 12mm.

Grave 895. (1040N/487E) Child (Fig. 4.35)

NB 209.19, 52

Grave pit: Straight-sided with rounded ends and undulating base, 1.37m long by 0.58m wide and 0.41m deep, orientated NE–SW.

Pit fill: Light brown pebbly loam with patches of sandier material.

Finds in fill: Fired clay and reddened flints in top 0.15m; sherds of ? residual flint-gritted pottery.

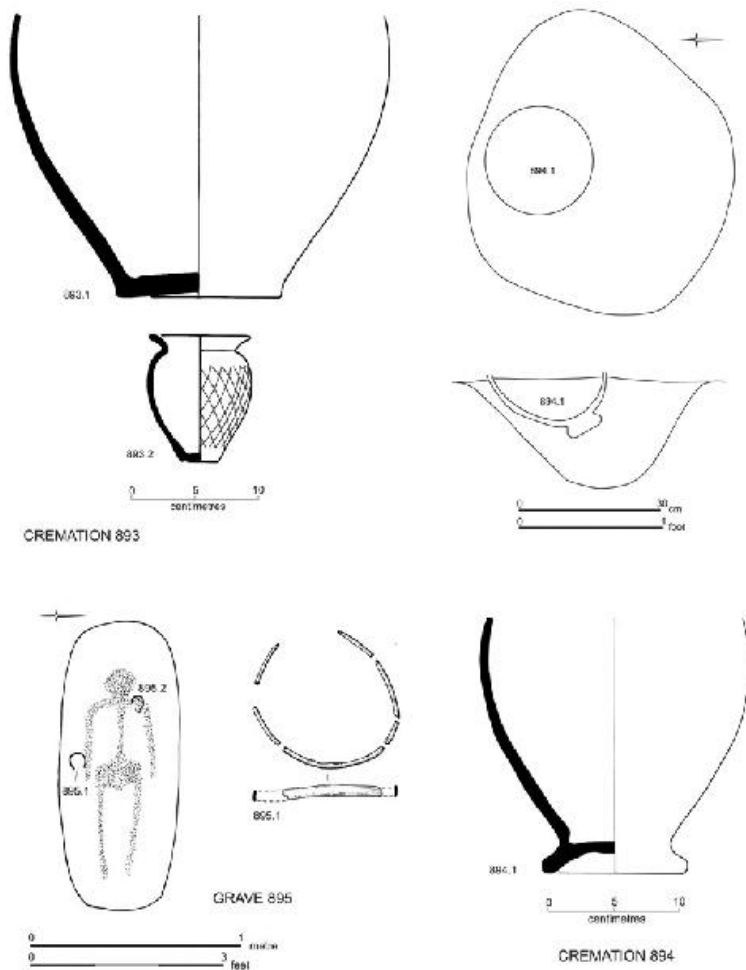


Figure 4.35. Plans, sections and grave-goods from Cremations 893 and 894 and Grave 895.

Grave furniture: None.

Grave-goods:

895.1 Six fragments of a narrow oval penannular bracelet with rectangular cross-section with an internal diameter measuring approximately 50–55mm. Th. 1.5mm, W. 4mm, total Wt 3g. The metal fragments are burnt, pitted and degraded with evident metal loss. Found at slight angle near location of right wrist.

895.2 Bronze bracelet [no lab number; not found, not illus.] at right shoulder.

Bone: Child's grave, with extended supine body preserved as a good silhouette, head to east, facing up.

Grave 896. (1050N/495E) Mature Adult (Fig. 4.36)

NB 209.65–6, 150.236

Grave pit: Rectangular, with rounded corners. $2.87 \times 1.08 \times 0.33\text{m}$ deep, orientated WSW–ENE. Cut into an earlier pit which is probably an earlier cremation burial.

Pit fill: light/medium brown loam with patches of gravel.

Finds in fill: Amphora sherds, grey ware and other sherds plus glass fragment – accidental inclusions, from a disturbed cremation (1052N/497E; Cremation 896a) into which grave cuts. Charcoal, fired clay flecks, and a fragment of iron sheeting/plate of uncertain function. The probable cremation pit produced several sherds of glass, an upside down Nene Valley colour coat beaker (which could represent an inhumation grave-good) and sherds from a flagon (LD07) and bowl (OD01), together with cremated tooth remains indicating a child (*Infans I*); it probably dated to the second century AD.

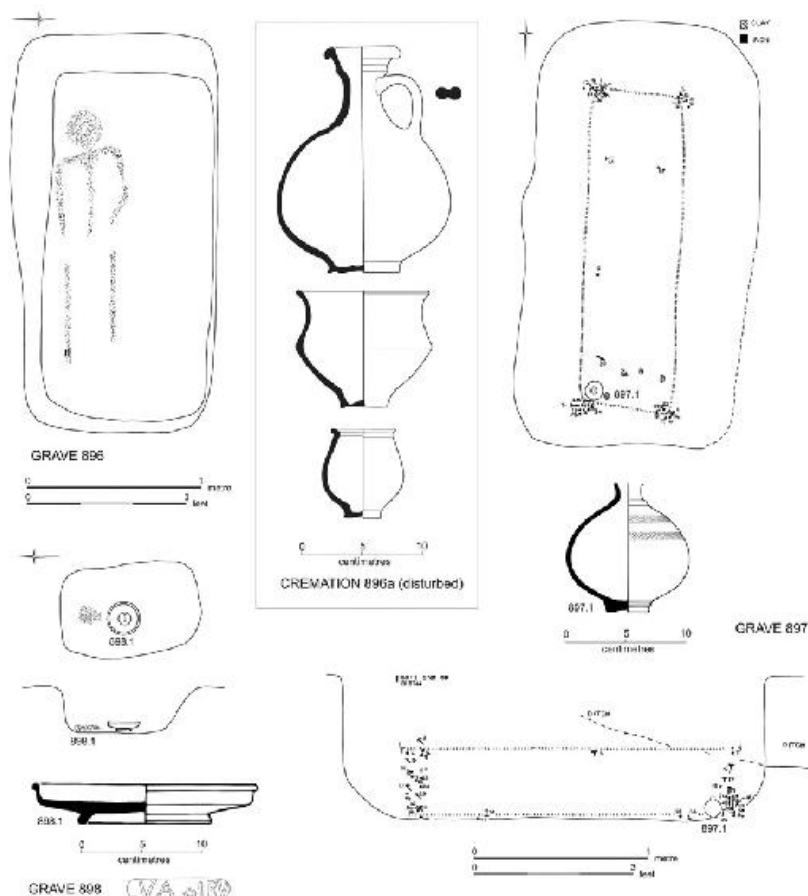


Figure 4.36. Plans, sections and grave-goods from Graves 896, 897 and 898, and disturbed cremation (896a) under Grave 896.

Grave furniture: None.

Grave-goods: None (all finds residual).

Bone: Size of stain suggests adult. Body stain noticed, supine and extended in the right half of the grave, with head to west, facing up. Two molars and two premolars, encrusted enamel crowns, very fragile, Flattish wear with the centre grooves still in place.

Grave 897. (1090N/507E) Adult (Fig. 4.36) NB 209.89, 93, 221.50

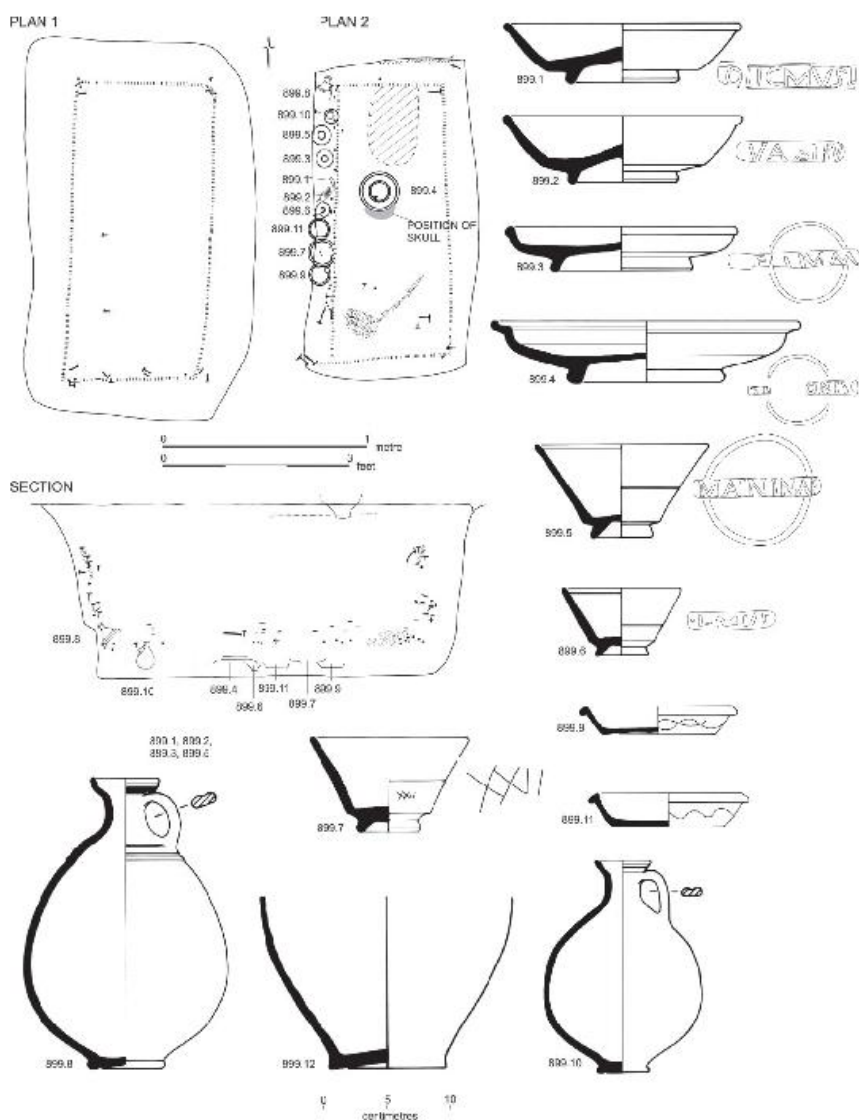


Figure 4.37. Plans, section and grave-goods from Grave 899.

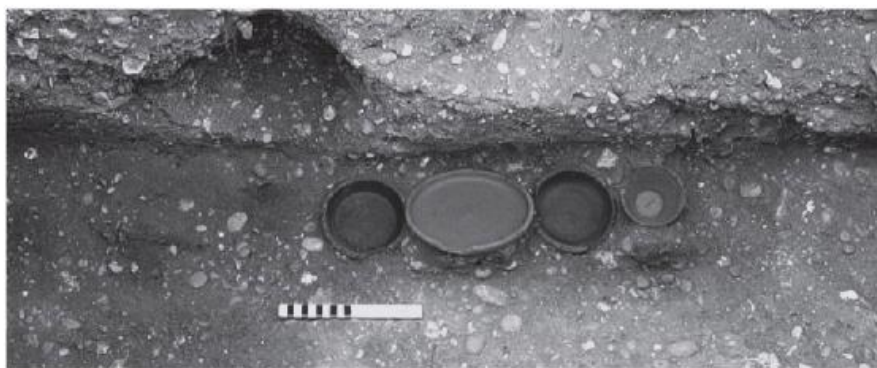
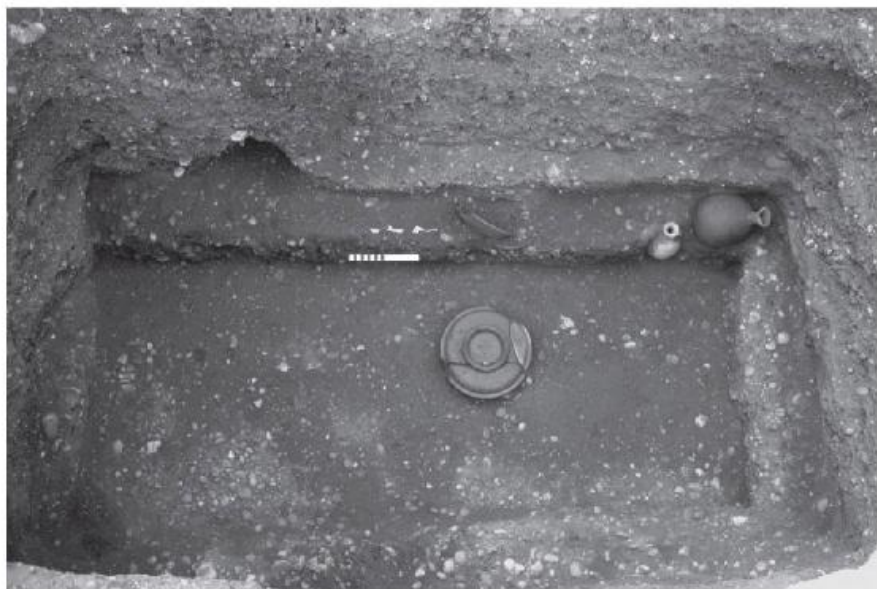


Figure 4.38. Photographs of Grave 899.

Grave pit: Rectangular grave with rounded corners, vertical sides and flat base, measuring 2.43 by 1.35m and 0.81m deep. Cut into silted up ditch that forms the N boundary of cemetery. Orientated NW-SE.

Pit fill: Fairly dark silty loam, with gravelly patches, and some very gravelly light coloured fill.

Finds in fill: Sherds from various IA and RB vessels. All appear abraded – accidental inclusions.

Grave furniture: Forty-one nails found in the grave fill clearly outline a nailed oak coffin measuring $1.83 \times 0.59 \times 0.40$ m. Stains indicated on sketch plan in relation to nails, but not made clear if coffin or body

stains.

Grave-goods:

897.1 Narrow-necked bulbous jar, with cordon at the base of the neck, in GFN fabric. There are two bands of incised decoration on the upper part of the body, and two cordons just above the base. Mucking/Thames Estuary product (KA01), AD 110/20–200/10. The stain on the body of the pot is not caused by differential firing, but by rust. Inside coffin by right foot.

897.2 [Not illus] Single hobnail from high up in coffin fill; probably intrusive.

Bone: Poor silhouette of head only, which was to NW.

Grave 898. (1080N/508E) Child (Fig. 4.36)

NB 150.238

Grave pit: Rectangular grave, with rounded corners, vertical/sloping sides and flat base, measuring $0.84 \times 0.58 \times 0.25$ m deep, orientated NW–SE.

Pit fill: No data.

Grave furniture: None.

Grave-goods:

898.1 Almost complete samian dish, Walters 79 (diameter 190mm), stamped by Vagi-ro/Vagirus 7a 79; 31 VAGIRV Lezoux^b A stamp noted several times on form 80. He also made form 27. c. AD 155–85. Placed right way up over the chest.

Bone: Poor silhouette with only head stain clear, but identified as a very small child's grave, with head to NW facing up.

Grave 899 (1025N/495E) Child (Infans I) (Fig. 4.37–8)

NB 109.78, 151.29, 33–4, 36–8, 47–56, 58

Grave pit: Large rectangular pit with slightly bowed sides, measuring $2.13 \times 1.22 \times 1.02$ m deep, orientated NNW–SSE. The regular and crisply defined corners with associated nails suggest the grave-pit noted was actually a chamber, and that the grave pit was itself not observed.

Pit fill: Gravelly with occasional clayey lumps, but more loamy inside the distinct line of nails representing one of the coffin's long sides. Very hard gravel in lower part of fill. *Grave furniture:* As noted above, the 'pit' is so regular and sharply defined that it probably constituted a chamber, a suggestion strengthened by the fact that traces of wood staining were noticed at one end, and that in three of the pit corners there were nails, possibly *in situ*. Centrally placed inside the pit or chamber was a nailed coffin measuring 1.38×0.79 m and 0.46m deep. No hinges or lock mechanism were found, but at least 104 nails

were recovered.

Grave-goods: The burial contained 11 pottery vessels and other material. Vessel 12 had either been stood on the lid of the coffin or been a later insertion into the top of the grave. One vessel (899.4) was placed within the coffin over the head of the body, while the remainder of the vessels had been placed in the narrow slot between the coffin and the edge of the chamber.

899.1 Almost complete Drag 18/31 (Diam. 190mm), stamped by Decmus, probably of the Argonne. Decmus iv 2a 18/31 DIICMVSF. This stamp has been found at Lavoye and Decmus almost certainly worked there, but die 2a was probably also used at Haute-Yutz and another of his stamps occurs at Sinzig. The use of this particular die on forms 79 and 80 suggests a date c. AD 140–200.

899.2 Almost complete Drag 31 (Diam. 190mm), stamped by Vagi-ro/Vagirus 7a 79; 31 VAGIRV Lezoux^b. A stamp noted several times on form 80. He also made form 27. c. AD 155–85. Slightly burnt, with a worn foot.

899.3 Almost complete Walters 79 (Diam. 180mm), stamped by Aestivus 3c 79 AESTVIM Lezoux^a. Aestivus' stamps are recorded at Pudding Pan Rock and Hadrian's Wall Period Ib. His forms include 31R, 79, Tg and occasionally 27. c. AD 155–95.

899.4 Almost complete Ludowici Tg (Diam. 250mm), stamped by Tituro of Lezoux. Tituro 5b Tg; Tx; 79 etc. T□TVRONIS Lezoux^b. A late Antonine potter making forms 31R, 79, 79R, 80, Tg and Tx. There is no independent site dating for this die, though others have been noted from Hadrian's Wall and the Wroxeter Gutter. c. AD 170–200. Worn in use. Found upside down.

899.5 Complete Drag 33 (Diam. 130mm), stamped by Mainina of Trier. Mainina 1a 33 MAININAF Trier^a. There is little dating evidence for Mainina, but his forms, mainly 18/31, 27 and 31, suggest that he was not one of the later potters at Trier. 1a occurs in Period I at Zwammerdam (before about AD 175) and a single example of form 80, stamped with a different die, indicates activity down to AD 160, or later. c. AD 145–75. The lip and foot are worn. 899.6 Almost complete Drag 33 (Diam. 90mm), stamped by Remicus. Remicus 1b' 33 ^{PE}EMICF. The distribution of Remicus' stamps suggests that he worked at La Madeleine, though none have actually been found there. The number of examples in Britain is high, all in the eastern part of England. His output consists of forms 18/31, 27, 31 and 33. c. AD 130–60. Worn lip and foot.

899.7 Complete Drag 33 (Diam. 130mm), EGR. Unstamped but finished with a crude swirl incised on the floor, first half of the third century. The foot is worn, and there is a graffito XXII – presumably a numeral – on the exterior wall. 899.8 Ring-necked flagon in VRW

fabric (LE01; Ht 268mm). AD 120/30–180/200.

899.9 Bead-rimmed dish in BBT2 fabric (RB05; Diam. 116mm). AD 110/20–170/80.

899.10 Ring-necked flagon in VRW fabric (LE01; Ht 168mm). AD 120/30–180/200.

899.11 Bead-rimmed dish in BBT2 fabric (RB05; Diam. 120mm). AD 110/20–170/80.

899.12 High shouldered storage jar in GVC fabric. Rim and upper part of body missing. Very similar to 891.1, 892.1 and 893.1 (base Diam. 94mm). AD 70–300+.

Bone: 'Just traces' found, identified as an *Infans* I. Head stain seen, plus some probable teeth in the fill adhering to one of the pots; this pot was presumably that which was inverted in the centre of the coffin. Although the coffin itself was nearly adult-sized, there is clear evidence for this having been the burial of a child. Orientation is, however, uncertain, as possible areas of body staining were noted both to the north and south of the central head position; that to the north is perhaps more convincing (implying a burial with head to the south, and grave-goods largely arranged down the left side of the grave).

Grave 900. (1091N/529E) Child (Fig. 4.39)

NB 223.10, 72, 74

Grave pit: Sub-rectangular, with rounded corners, vertical sides and flat base, measuring $0.76 \times 0.46\text{m}$ and 0.35m deep, orientated NE–SW.

Pit fill: Gravel and medium-dark pebbly loam. Contained streaks of sand.

Finds in fill: ?Prehistoric, hand-made, flint-gritted sherd. Shell gritted sherds and a flint flake, possibly all residual IA.

Grave furniture: None.

Grave-goods: None.

Bone: Bone noted, but no details available. Part of silhouette visible, indicating a child's grave, with head to north, facing up.

Grave 901. (1033N/497E) Child (Fig. 4.39)

NB 150.241

Grave pit: Sub-rectangular, with rounded ends, steeply sloping sides and flat base, measuring $1.32 \times 0.61 \times 0.38\text{m}$ deep, orientated NW–SE.

Pit fill: No data available; two IA sherds and three small RB sherds are residual.

Grave furniture: Three large nails found. They appear to be from a nailed coffin, but no soil stain recorded.

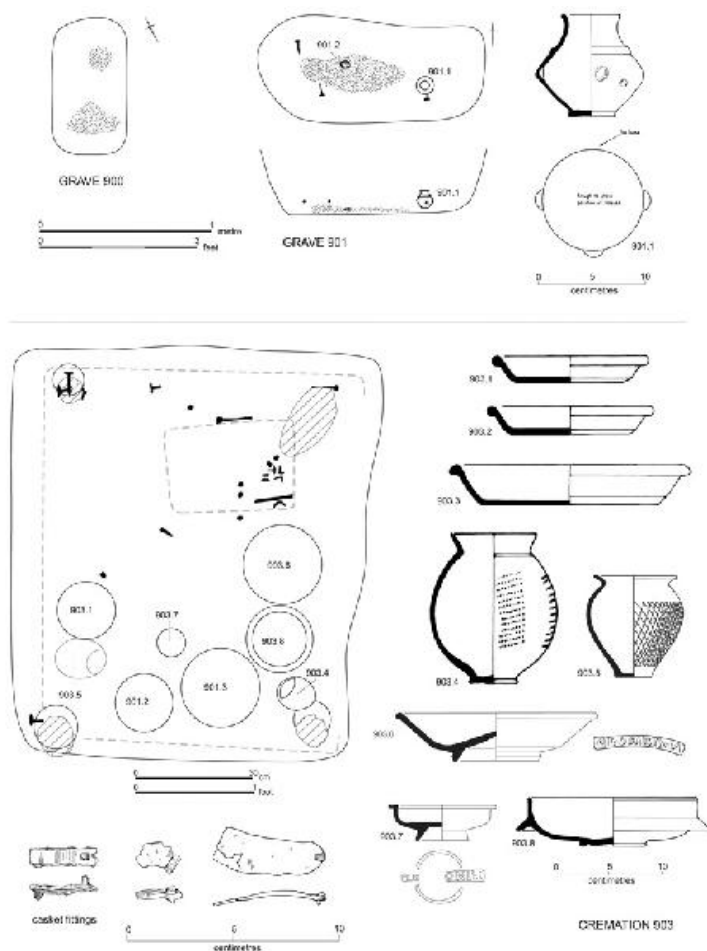


Figure 4.39. Plans, sections and grave-goods from Graves 900 and 901, and Cremation 903.

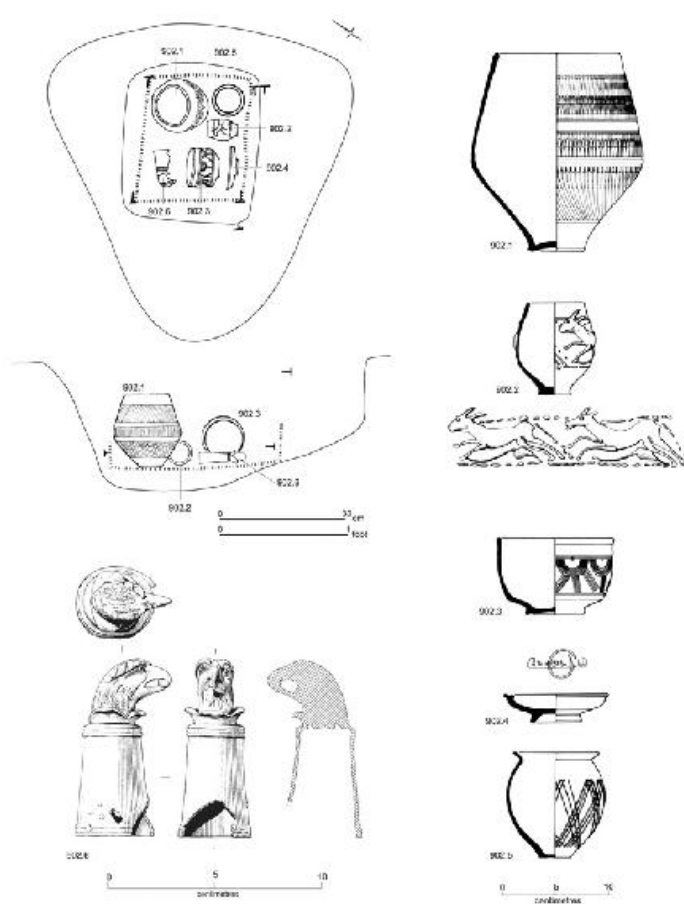


Figure 4.40. Plan, section and grave-goods from Cremation 902.

Grave-goods:

901.1 Small grey-ware beaker with three crude pushed-out bosses at the maximum girth of the body; below finger damage to pot. Slight cordon below neck, burnishing at base; area of oxidisation: a second. Mucking fabric. The vessel might have once been classed as Romano-Saxon ware, but is not (Rim 52mm; Base 40mm; EVE 1.0). Probably AD 160–220. Found by the foot.

901.2 [Not illus] Thin, fragmentary copper alloy wire bracelet found on/in? stain. No further details; not found. *Bone*: Silhouette indicates a supine child burial with head to west.

Cremation 902. (1030N/490E) Adult Male (Fig. 4.40)

NB 150.242

Grave pit: Sub-triangular, with rounded corners, sloping sides and rounded base, measuring $0.76 \times 0.71 \times 0.33\text{m}$ deep.

Pit fill: Residual IA sherds.

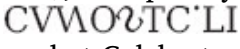
Grave furniture: Six nails found in the grave fill, at the corners of the soil-stain of a small, square box, measuring 0.31m square and 0.28m deep; the uppermost nail shown in the section drawing may not be *in situ*. Cremation placed in vessel 902.1; accompanying vessels were also inside the box.

Grave-goods:

902.1 Bag-shaped beaker with plain rim in CLC fabric. White body with dark brown/black slip. There are three bands of rouletting on the body. This vessel has been damaged by fire post-manufacture; there are several areas of orange/red discolouration (Rim 110mm; Base 40mm; Ht 190mm; EVE 1.0). AD 150–250. This vessel was used as the cinerary urn.

902.2 Bag-shaped beaker with barbotine decoration in CLC fabric. White body fabric with dark brown/black slip. Two deer running right to left. Poorly made. Probably Colchester Kiln 32 (Rim 53mm; Base 32mm; Ht 95mm; EVE 1.0). AD 150–250.

902.3 London Ware bowl, imitation Drag 30, LONW fabric (TH01). Incised compass decoration, semi-circle with three groups of straight lines radiating out (Rim 110mm; Base 60mm; Ht 70mm; EVE 1.0). AD 80/90–160.

902.4 Complete samian Ludowici Tx (diameter 100mm), stamped by Cunopectus of Colchester. Cunopectus 2a Tx  Colchester. Most of Cunopectus' stamps have been found at Colchester (Hull 1963b, 87). The name always looks somewhat illiterate, but there are clearer dies obviously belonging to the same potter. His forms include 31, 79/80, Tx and Tx/Tg. A date c. AD 160–200 is likely. 902.5 Everted rim jar with burnished lattice decoration in GFN

fabric (Rim 80mm; Base 40mm; Ht 100mm; EVE 0.65). Thames Estuary product (EA01). AD 170/80–250+.

902.6 (Description by Grahame Appleby) A well-preserved eagle headed finial (L. 82mm, Wt 86g). The head emerges from a calyx of three feathers. The head is decorated with moulded and finely incised layered head and neck feathers, eyes, heavy brows and distinct cheeks. The hooked open beak holds a small object. The finial has a hollow oblate rounded socket, wider at its base (35 × 29mm), tapering towards the head (28mm). The lower and upper parts of the socket are decorated with three bands. The socket possesses two opposing perforations, slightly forward of the transverse axis. Both perforations are damaged, with that on the right sided forming a rectangular lumen; the left-sided perforation is distorted outwards with a slight ‘tear’ at the bottom. Otherwise, the socket is undecorated, although there are four raised dimples arranged in a lozenge (these may be remnants of the casting process as one has clearly been reduced in height). The base of the socket is broken at the front where an upward pointing ‘hook’ representing a swan or similar would have been located. Out-turning of the socket along the break suggests this was broken off with some considerable force. The external and internal surfaces of the socket bore both the imprint and the semi-replaced mineral traces of a textile. The finial was submitted to Dr E. Crowfoot, who reported the fibre to be perhaps flax, ‘Z/Z’ spun, tabby weave, with a count of 14/14.

902.7 [Not illus] A kidney-shaped scrap of leather 25mm long indicates that organic objects were also present in the burial. Visible on part of it was a patch of replaced textile. The area had been impregnated with copper salts, which may also account for the survival of the leather. No report on the textile fragment is available. (AML 731447).

Bone: Poor preservation, complete burning, white in colour, 680g, max L. 58mm.

Cremation 903. (1043N/507E) Adult (Fig. 4.39)

NB 164.123

Grave pit: Rectangular, with regular sides and sharp corners

1.07 × 0.92 × 0.33m deep. Soil stains clearly show that three, and probably all four sides were lined with wood; see below.

Pit fill: Residual IA sherds.

Grave furniture:

Wooden cist

As noted above, there are suggestions that the grave was lined with wood, for against three of its sides a soil stain, probably decayed wood, was found. There was an almost complete lack of associated

nails (in contrast with the casket within the chamber), which suggests that the wooden frame was jointed or pegged and inserted into the gravepit in prefabricated form, although soil stains with pairs of associated nails may indicate the use of corner posts. This measured $1.01 \times 0.76 \times 0.3\text{m}$ deep.

Casket

Within the cist a cluster of 31 nails and further wood stains indicated a small casket ($0.33 \times 0.23\text{m}$, depth uncertain) and two associated binding straps and an 'L'-shaped tumbler lock lift key. This was placed within the cist, towards the centre. There were eight accompanying vessels outside of the casket, but it is uncertain where the cremated remains were placed; quite possibly these were inside the casket itself (but only a token amount was present – see below).

Grave-goods:

903.1 Bead-rimmed dish, burnished overall, with chamfered base, in BBT2 fabric (RB05). (Rim 150mm; Base 110mm; Ht 30mm; EVE 0.98). Marsh and Tyers IVH.5. AD 110/20– 170/80.

903.2 Bead-rimmed dish, burnished overall, in BBT2 fabric (RB05). (Rim 160mm; Base 120mm; Ht 30mm; EVE 0.98). Marsh and Tyers IVH.5. AD 110/20–170/80.

903.3 Bead-rimmed dish, burnished overall, in BBT2 fabric (RB05). Kiln waste; fire damaged (Rim 220mm; Base 165mm; Ht 45mm; EVE 0.98). Marsh and Tyers IVH.5. AD 110/20–170/80. All three bead-rimmed dishes have a small area removed from their rims.

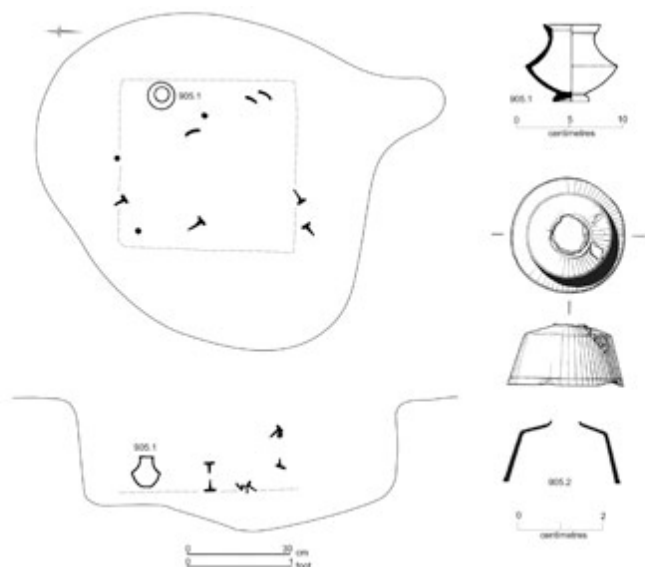


Figure 4.41. Plan, section and grave-goods from Cremation 905.

903.4 Poppyhead beaker in ?N Kent very fine grey ware with everted rim (GFN; NM06). Possibly a second; damaged inside and out. Either very thick slip or two surfaces to pot (Rim 80mm; Base 45mm; Ht 146mm; EVE 0.87). Probably Grays-Palmers. Marsh and Tyers III.F.5. AD 100–160.

903.5 High-shouldered jar with everted rim and burnished lattice in GRY fabric (EA02). This vessel is an obvious kiln waster; the whole surface has been badly damaged by spalling (Rim 80mm; Base 35mm; Ht 96mm; EVE 0.51). Marsh and Tyers II.F.8. AD 120/30–250.

903.6 Almost complete Drag 18/31 (diameter 180mm). Glosabinia la 18/31 **GLOSABINIA** The name is not completely certain, though the above seems the most likely. There is no conclusive evidence for a pottery (?La Madeleine) and nothing in the way of site dating. All his known stamps seem to be on form 18/31 or 18/31–31. Probably c. AD 130–160.

903.7 Almost complete Ludowici Tx (diameter 100mm). Stamp: Tituro 5b Tg; Tx; 79 *etc.* (two examples) TITVRONIS Lezoux^b. A late Antonine potter making forms 31R, 79, 79R, 80, Tg and Tx. There is no independent site dating for this die, though others have been noted from Hadrian's Wall and the Wroxeter Gutter. c. AD 160–190. A hole which pierces the side wall probably began as a blister during firing.

903.8 Almost complete dish or lid (diameter 160mm), a shallow copy of a Drag 38 with a crudely-shaped flange and a tiny foot-ring. Relatively coarse pinkish-brown fabric with a thick orange wash on the surface; oxidised and poorly made; fire crazed; local product. Mid to late second century? 903.9 [Not illus] At least 13 hobnails with mineral-preserved leather, placed inside the casket.

Bone: Poor preservation, complete burning, white in colour, 15g, max L. 31mm.

Cremation 905. (1065N/517E) (Fig. 4.41)

NB 150.245

Grave pit: Sub-circular, measuring 0.94 × 0.91m and 0.36m deep.

Pit fill: Some residual RB sherds.

Grave furniture: Soil stain and seven nails of a small, square nailed box, measuring 0.51 × 0.51m and 0.3m deep, together with three fragments of binding strap. One accompanying vessel was placed inside the box, but it was uncertain whether the cremation had been placed inside this or not.

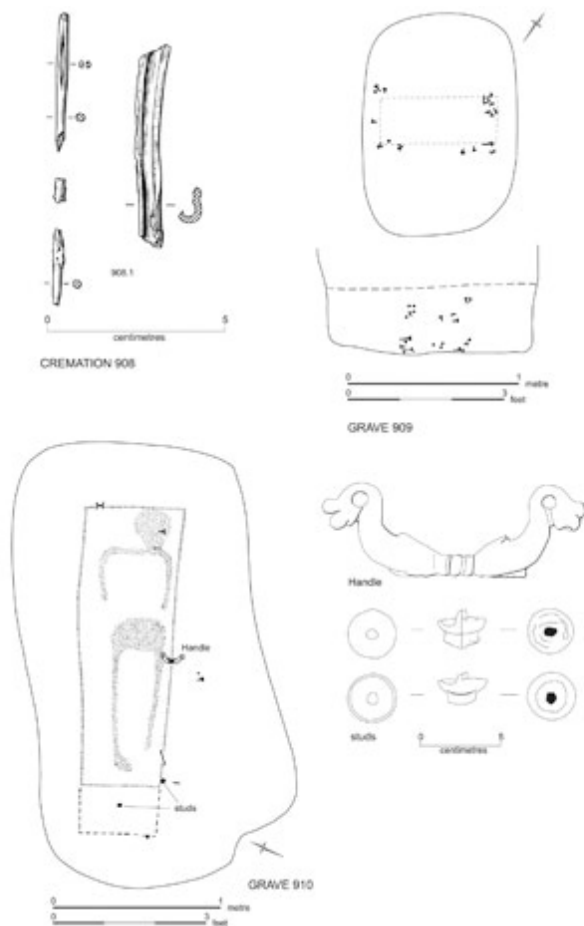


Figure 4.42. Grave-goods from Cremation 908, and plans, sections and grave-goods from Graves 909 and 910.

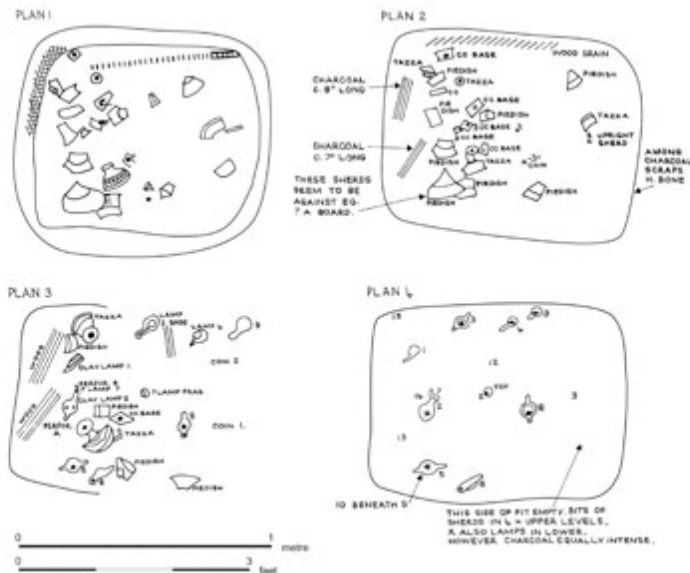


Figure 4.43. Plans at successive levels of Cremation 911, the 'epula' deposit.

Grave-goods:

905.1 Carinated beaker in GFN fabric (OB02; Ht 73mm, Rim 53mm; Base 30mm). North Kent or Colchester, Cam 120B (as at Slay Hills). AD 55–90. Placed against the side of the casket.

905.2 Copper-alloy ?*tintinabulum*. Somewhat corroded. Decayed wood adhering in parts (?decayed remnants of case). For the presence of a cymbal in a burial at Kelvedon, Essex, see Rodwell 1988, 73, fig. 59. [AML No. 731445]

Bone: Cremation. No data preserved.

Cremation 908. (1066N/576E) Adult (Fig. 4.42)

NB 221.175

Grave pit: Area of burnt bone and charcoal, seen as intrusive in RB ditch (A6A).

Pit fill: Burnt bone and charcoal.

Grave furniture: No data.

Grave-goods:

908.1 Part of shaft and eye of an iron needle, found in a bone (? needle) case. New break but point not found (*cf.* Cremation 792, also with a bone needle).

Bone: Poor preservation, complete burning, white in colour, 142g, max L. 38mm.

Grave 909. (1041N/493E) (Fig. 4.42)

NB 150.2

Grave pit: Oval, with slightly squared-off ends, vertical sides and flat base, measuring $1.22 \times 0.89 \times 0.53\text{m}$ deep.

Pit fill: No data.

Grave furniture: Rectangular soil-stain and 24 nails show the interment was placed within a wooden box, which measured $0.71 \times 0.3 \times 0.23\text{m}$ deep. It appeared to have been nailed together. There was no trace of a hinge- or lock-mechanism.

Grave-goods: None.

Bone: No silhouette or remaining bones, but length of grave (if not a cremation) suggests a child, although unusual in that container was placed across the width of the grave.

Grave 910. (1025N/514E) (Fig. 4.42)

NB 151.39–41

Grave pit: Large, sub-rectangular feature with rounded ends. $2.64 \times 2.37 \times 0.81\text{m}$, orientated ENE–WSW.

Pit fill: Rather compact pebbly loam within gravelly fill.

Finds in fill: None save iron strap and rivet (possibly a disturbed coffin fitting) and eight small sherds of RB and IA pottery.

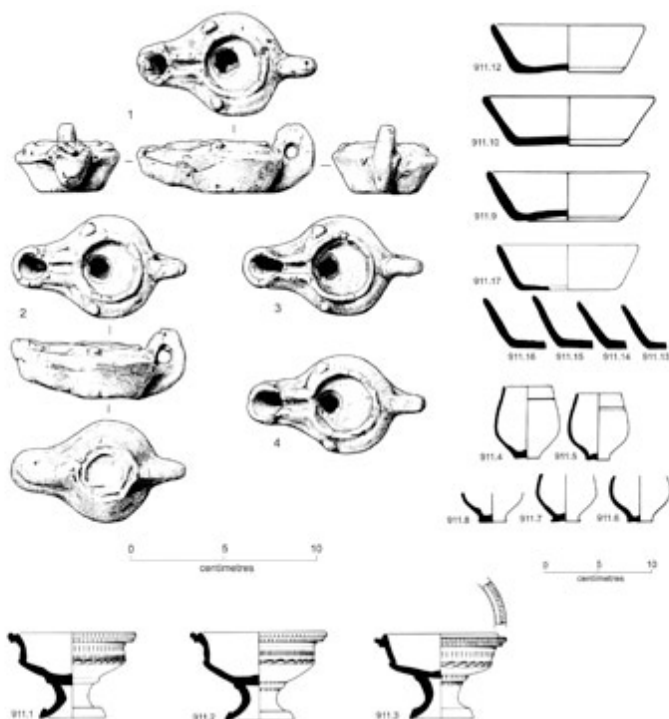


Figure 4.44. Associated finds from Cremation 911.

Grave furniture: Eight nails and clear stain of a coffin ($1.83 \times 0.61\text{m}$, depth uncertain) and an accessory box. A copperalloy handle (with the form of two opposing dolphins) was found 'in the fill of the grave' on top of the right hip of the body. This object, together with the two annular studs found at the foot-end of the grave may derive from a small casket with bronze footstands placed at the end of the coffin, the handle having been disturbed. Third century?

Grave-goods: None observed (but see above, under 'grave furniture').

Bone: Slight soil silhouette only, indicating an extended supine inhumation with arms to sides and head to ENE, facing left.

Cremation 911. (1045N/499E) (Figs. 4.43–5)

NB 151.23, 25–8, 43–4

Grave pit: Squarish, with a flat bottom and rounded corners, measuring $0.97 \times 0.84 \times 0.15\text{m}$ deep. Three of the sides are described as 'reddened gravel', and the pit was assumed to have been the site of a fire, but this is not certain; reddening could have been caused by heated remains being deposited in the pit (see below for alternative explanations).

Pit fill: Extremely varied fill comprising the remains of a fire (with poplar, oak and hazel charcoal represented). The pit was crammed with charcoal, with some timbers 230mm long.

Finds in fill: Large and small fragments of wood, including pieces 100–150mm long, bits of fired clay, presumably shaped objects. These were split and impossible to recover. Also in the fill were date stones, hazelnut shell fragments, and carbonised pine kernels, together with fragments of eight plain-rimmed platters, three *tazze*, 11 similar micadusted lamps, and the remnants of five bag-shaped beakers, probably continental imports. Also found were the ?heataffected remains of nine first- and second-century AD coins. There were also fragments of bone. The *tazze* seem to have been placed in the pit last, as they lay towards the top of the deposit.



Figure 4.45. Photographs of Cremation 911.

Grave furniture: No data.

Grave-goods: No data.

Bone: Very few cremated bones.

Remarks: The small amount of burnt bone found (but not reported on, and which cannot now be found) has led to the description of this feature as ritual. The fill was truncated, and assuming that some finds were therefore lost, it has been postulated that this pit represents the remains of a rite involving 10 participants who each tossed in a set comprising a cup, plate, lamp, and coin. Alternatively, it may represent a *favilla* containing the remains of a desecrated shrine, subsequently burnt down to cleanse it, with the remains then deposited into an appropriate feature (R. Reece, pers. comm.).

Coins (P.E. Curnow and Richard Reece)

1. Titus. AD 77–78 (RIC [Vespasian] 786).
(Mucking 96; AML No. 731264).
2. Claudius I. AD 43–60 (as, Minerva copy).
(Mucking 94; AML No. 731262).
3. Antoninus Pius. AD 138–161 (RIC 934).
(Mucking 95; AML No. 731263).
4. Vespasian(?). AD 69–79 (as, reverse illegible).
(Mucking 93; AML No. 731261).
5. Antoninus Pius. AD 138–61 (RIC 934).
(Mucking 92; AML No. 731260).
6. Antoninus Pius. AD 138–61 (as, reverse as 566)
(Mucking 99; AML No. 731267).
7. Antoninus Pius. AD 138–61 (RIC 685).
(Mucking 100; AML No. 731268)
8. Faustina II. AD 145–61. Good head to right. (RIC [Ant Pius] 1395).
(Mucking 98; AML No. 731266).
9. Uncertain. AD 50–200 (as, reverse illegible).
(Mucking 97; AML No. 731265).

Coins 6–7 were found on the bottom of the pit and so must have been among the first thrown into it.

The Lamps (Donald Bailey)

The lamps were found in a rectangular cremation pit, together with pie-dishes, *tazze* and small colour-coated beakers. These artefacts were apparently tossed in. Also found in this context were coins of Vespasian, Faustina II and Antoninus Pius. The cemetery in which the pit was situated appears to date to about AD 170–200, a possible date for the lamps, but they may be rather earlier, in the middle years of

the second century. The pit contained seven complete lamps, and three near-complete lamps. There were also some fragments and it is possible to suggest that there were eleven lamps in all (it is probable that ploughing had removed some of the fill of this feature). All the lamps are poor versions of Loeschcke 1919 Type IXb *Firmalampen*, each with a substantial pierced handle and a stud on each shoulder. All the filling holes were cut out with a knife, rather than pierced with a tubular tool, as was normal; the wick holes are distinctly flared. The lamps stood on a multiple base ring, depressed within. The ware was originally buff, and generously mica-dusted, but may have been reduced to a grey colour by the fire in the ritual pit, and one lamp (No. 1) has reddened.

There is little doubt that Lamps 1, 3–4, 7–8 and 11 came either from the same mould or from moulds in the same series. They all have a distinctive, asymmetric rear and the two shoulder studs are asymmetric in the same way on each lamp. Lamp 10 might belong to the series. Lamps 2 and 6 are less certainly from the series but could conceivably be so, while Lamp 5 is too fragmentary for conclusions to be drawn. It seems likely that the lamps were all acquired as a group for whatever purpose involved them in eventually being committed to the pit.

The catalogue listing below uses the enumeration devised by the first recorder and/or illustrator of the lamps. Lamps 1, 3, 4 and 11 have fine finished drawings at half-scale; very competent measured sketches, also at half-scale, survive for Lamps 1–4, 6–7, 9 and 11; Lamps 5, 8 and 10 were not drawn. Although several measurements were originally made, only length and width have been used in the catalogue entries. All the lamps and fragments share the same fabric descriptions mentioned in the first paragraph above, and also are similar to the physical descriptions given there.

1. Mouldmade lamp of Loeschcke (1919) Type IXb. Complete: L. 93mm, W. 56mm.
2. Same type. Complete: L. 96mm, W. 53mm.
3. Same type. Complete: L. 93mm, W. 53mm.
4. Same type. Complete: L. 93mm, W. 55mm.
5. Same type. Fragmentary and unillustrated.
6. Same type. Complete: L. 93mm, W. 57mm.
7. Same type. Complete: L. 96mm, W. 56mm.
8. Same type. Fragmentary and unillustrated.
9. Same type. Nozzle-tip and top of oil-chamber damaged. L. 93mm, W. 54mm.
10. Same type. Fragmentary and unillustrated.
11. Same type. Nozzle-tip broken: L. 95mm, W. 56mm.

Although the lamp shape is common in the second century in Britain, except for one other lamp close parallels for this particular group (which must be of British manufacture: importation from the continent can probably be discounted) have not been traced. There is nothing like them in the collections of the Museum of London or in the collection of material held by the Department of Urban Archaeology in London. Nor are the *Firmalampen* in Colchester Museum near to these Mucking lamps (personal examination). *Firmalampen* from British sources in the British Museum are not close to these but for the exception alluded to above. This is Reg. No. PE 1886.6-26.1 (Bailey 1988, Q 1610), found with cremation burials in 1837 at Boxmoor, Hemel Hempstead, in Hertfordshire. The Boxmoor lamp is similar in shape and details of production, but not in fabric and surface treatment, to the Mucking lamps, and is rather larger in size, and indeed, the Mucking evidence has been used to date the lamp in the BM Catalogue. The distance between Hemel Hempstead and Mucking is not inconsiderable and any direct relationship between the lamps is uncertain. However, three lamps in the British Museum (Bailey 1988, Q 1605–7) are not unlike the Mucking lamps, and are in a similar mica-dusted fabric. All were found in London (indeed six such lamps were discovered with Q 1605). They are probably of the middle years of the second century AD. Mica-dusted *Firmalampen* are known from both Colchester and London (Bailey 1988, 154) and London may be the source of the Mucking lamps.

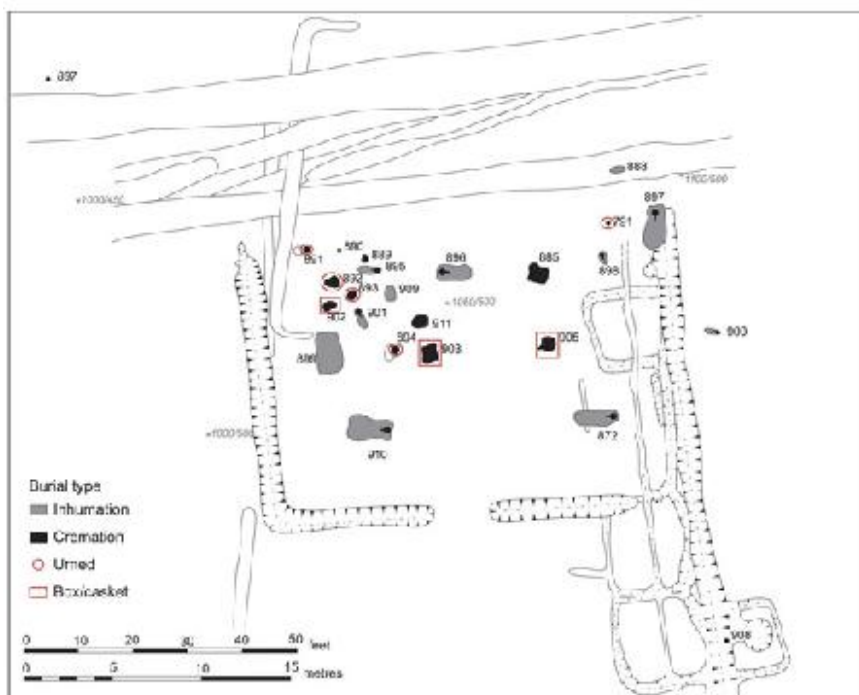
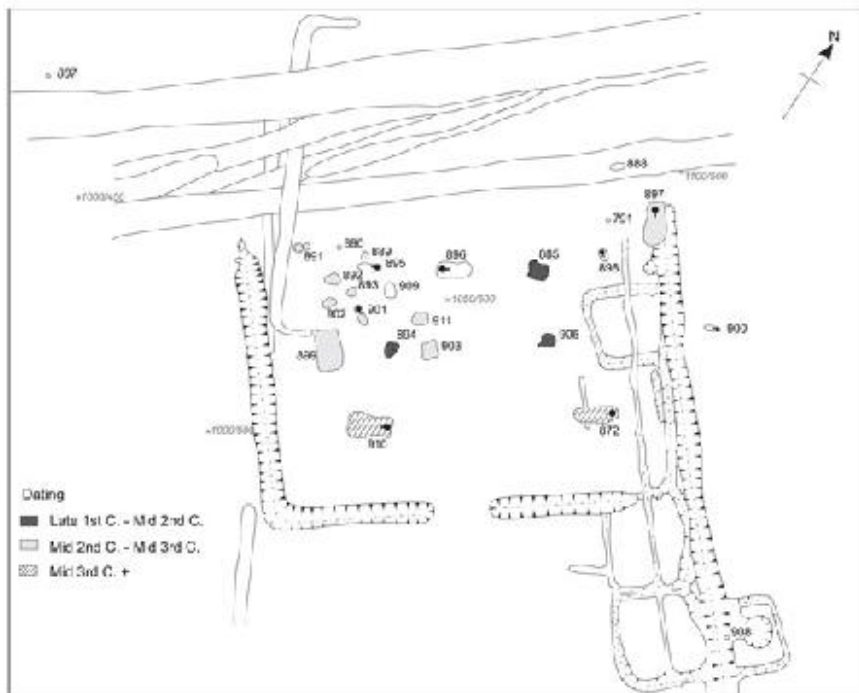


Figure 4.46. Plan of Cemetery II showing dated cremations and inhumations (upper); below, plan showing location of inhumation burials, and of cremation burials, indicating which are casket, box and urned

Table 4.7. Summary of burial attributes from Cemetery II cremations.

Grave No.	Sex	Age	Crem Bone Wt	Grave L.	Grave W.	Grave D.	Container/Marker	Box L.	Box W.	Box D.	Vessels	Other ornaments	Date
791	M + F	Adult + Adult	1300g	0.91	0.80	0.48	Vessel				2		Later 2nd to early 3rd AD
885	?	Adult	5.2g	0.70	0.61	0.15	?Casket	?	?	?	2	Riveted iron plates; possible glass vessels	AD 80/90-160
887	F	Adult	600g	0.48	0.48	0.22	-				0		?
889	M	Adult	1150g	0.46	0.46	0.15	-				1		AD 120-160
890	?	Adult	870g	?	?	?	-				0		?
891	M	Adult	700g	0.53	0.53	0.15	Vessel				3		AD 110/120-180/190
892	M + F	Adult + Adult	1150 + 492g	0.91	0.91	0.38	Vessel				4	Glass vessel + Cu alloy tube	AD 190-240
893	M + F	Adult + Adult	920 + 260g	?	?	?	Vessel				2		AD 120/130-230
894	F	Adult	27g	0.61	0.58	0.25	Vessel				1		AD 50/60-180/190
896a	?	Child	?	?	?	?	-				3	Possible glass vessel	2nd AD?
902	M	Adult	680g	0.76	0.71	0.33	Box	0.31	0.31	0.28	5	Eagle finial	AD 180-250
903	?	Adult	15g	1.07	0.92	0.33	Cist + Casket	0.33	0.23	?	8	Hobnails; iron strap end	AD 150-200
905	?	?	?	0.94	0.91	0.36	Box	0.51	0.51	0.30	1	Tintinnabulum	AD 55-90
908	?	Adult	142g	?	?	?	-				0	Iron needle	?
911	?	?	?	0.97	0.84	0.15	-				27+	9 coins	Later 2nd AD

Other examples of a ritual-pit cremation (a *bustum*?) with *tazze* and lamps include one from Baldock (Stead and Rigby 1986, 78–81, dating before AD 270). Thirty-one wheelmade lamps of the same form were found, together with goblets, no doubt a local form of *tazza*. A *Brandgruben* probably of the second century AD in the Trier Altbachtal site, Building 50, contained lamps, mostly degenerate local *Firmalampen* of Loeschcke Type IX and Evelein (1928) Type B, *tazze* and colour-coated beakers (Gose 1972, figs. 380–5 and fig. 394). Lamps of Loeschcke Types IV and IX of about AD 80–110, and *tazze* were found in a similar pit in Great Dover Street in Southwark (Mackinder 2000, 10–13). Eckardt (2002, 106–9), in a discussion of ritual pits with lamps and *tazze*, mentions this Mucking material.

Pottery Vessels (Rosemary Jefferies)

911.1 *Tazza* in VRW fabric. Bands of incised decoration on the rim and upper part of the vessel. Below this is a band of frilling. Two more bands of incised decoration on the lower part of the vessel. Rim 120mm. Base 60mm. Ht 83mm. AD 50–200.

911.2 *Tazza* in VRW fabric. Bands of incised decoration on the rim and upper body. A band of frilling below. Rim 126mm. Base

- 62mm. Ht 84mm. AD 50–200.
- 911.3 *Tazza* in VRW fabric. Bands of incised decoration on the rim and upper body. A band of frilling below. Rim 125mm. Base 60mm. Ht 83mm. AD 50–200.
- 911.4 Bag-shaped beaker. Plain rim with incised horizontal line 10mm below the rim. White body fabric with dark brown/ black slip. CLC fabric. The beakers 911.4–8 have all been damaged at the time of burial. Rim 48mm. Base 24mm. Ht 74mm. EVE 0.98. AD 150–200.
- 911.5 Bag-shaped beaker. Plain rim with two incised lines 16mm below the rim. White body fabric with dark brown/black slip. CLC fabric. Rim 50mm. Base 22mm. Ht 73mm. EVE 1.0. AD 150–200.
- 911.6 Bag-shaped beaker. CLC fabric. The upper third of the vessel is missing. AD 150–200.
- 911.7 Bag-shaped beaker. CLC fabric. As 911.6 the upper third of the vessel is missing. AD 150–200.
- 911.8 Bag-shaped beaker. CLC fabric. The upper two thirds of the vessel is missing. AD 150–200.
- 911.9 Shallow dish with plain rim. GRY fabric. EVE 1.0 Rim 144mm. Base 100mm. Ht 40mm. Mucking product (RB03). AD 110/20–250/300.
- 911.10 Shallow dish with plain rim. GRY fabric. EVE 1.0 Rim 142mm. Base 100mm. Ht 40mm. Mucking product (RB03). Monaghan 5E1.1. AD 110/20–250/300.
- 911.11 Shallow dish with plain rim. GRY fabric. EVE 1.0 Rim 140mm. Base 98mm. Ht 40mm. Mucking product (RB03). Monaghan 5E1.1. AD 110/20–250/300.
- 911.12–17 All shallow dishes in GRY fabric but too badly damaged to allow measurement. They were all GRY fabric. Mucking products (RB03). Monaghan 5E1.1. AD 110/20–250/300.

Organic Remains (Graham Morgan)

1. Charcoal (at least 350 fragments of poplar and 170 fragments of oak).
2. Dates
3. *Pinea pinea* fragments
4. Hazelnuts

Overview – Cremation Burials

The cremations fall into two main groups: those with pottery vessels included as grave-goods (some of

which were contained within small boxes or caskets), and those with no associated pottery vessels ([Table 4.7](#); [Fig. 4.46](#)).

Unurned Cremations

The cemetery included three unurned cremations (Cremations 887, 890 & 908). While Cremation 887 should probably be seen as an isolated burial, lying as it did to the west of the enclosed cemetery, Cremation 890 is located among the cluster of furnished graves, and should be regarded as part of the cemetery proper. While there were other Late Iron Age cremations in this area (reported on in the Prehistory Vol.), Cremation 908 was recorded as being intrusive into ditch A6A, and is probably second-century or later in date.

Cremations 890 and 908 seem to be clear examples of unurned cremations (with recorded bone weights of 870g and 142g respectively), although the recording of these burials was generally poor, and 890 was truncated by ploughing. In neither was charcoal recorded, and just one had a possible grave-good: Cremation 908 had a fragment of iron needle, apparently contained within a bone case. Needles have been identified as grave-goods in two cremations at King Harry Lane (Phase 1 and Phase 3, Stead and Rigby 1989, 107) and in a box burial at St Pancras (Down and Rule 1971, 113–5), but the date range of these does not help to refine the dating of Cremation 908. This cremation was dug into the Romano-British boundary ditch of the cemetery enclosure, so seems to be contemporary with the rest of the burials from this cemetery, and must date stratigraphically to the second century or later. The amount of cremated bone found in Cremation 890 is within the accepted range for true adult cremation burials (McKinley 2000, 40–41), although a far lower amount was recorded from Cremation 908. This may, however, be a result of the poorer preservation conditions expected in unurned cremations.

Cremations Associated with Vessels

Ten of the cremation burials in Cemetery II were associated with pottery vessels, used either as cremation urns or as accessory vessels (see [Fig. 4.47](#)). The exceptional Cremation 911 is discussed below, as it appears to represent an *epula*, or ritual meal, rather than a cremation as such. The cremations in this cemetery were more richly furnished than the cremations in Cemetery I. Rather than being largely restricted to one vessel apiece, in Cemetery II, of 10 cremations with vessels, three have one each (two of these being late first- to early second-century in date), a further three have two each,

and other single examples are provided with three, four, five and eight vessels (all of these being later second- to earlier third-century in date). In six of these cremations – Cremations 791, 891, 892, 893, 894 and 902 – the cremated remains were certainly or probably placed inside a cinerary urn. These were mainly grey ware jars (that in Cremation 894 being a pedestal urn), but in Cremation 902 the cremated remains were placed inside a beaker (see further discussion under box burials, below). The usual container for Romano-British cremations was the pottery jar, although beakers and small jars were sometimes used for infants and small children (Philpott 1991, 30).

Cremation 902 was identified as an adult male; the use of a beaker in this burial as the cremation vessel is therefore somewhat unusual. Biddulph (2005, 27) has, however, identified this as a minority rite in his study of pottery grave-goods in Essex: from his database (which does not include Mucking), while 83% of urned cremations employed jars, 7% used beakers. He notes that all of these were dated to the mid first to early second century, and most of the beakers so used were relatively large, jar-like butt beaker types. Although the urn in Cremation 902 postdates the usual range, at 190mm in height it is still large and may, therefore, have been functionally equivalent.

Some interesting practices were seen in Cemetery II. In Cremation 791, a small globular flagon was placed upright as an accessory vessel next to the (inverted) jar that acted as the cremation urn, while in Cremation 885 the dish was probably placed upside-down over the beaker used as the cremation vessel (see Cemetery IV for further examples and discussion of this practice). In Cremation 889, the only vessel was a ring-necked flagon placed as an accessory vessel over and within the unurned cremation deposit (this practice was also seen in Cemeteries I and III).

Other graves also contained accessory vessels placed in more usual ways, either within the cremation urn, alongside, or both. In Cremation 891, the two accessory vessels – a carinated bowl and a cordoned jar – were placed upright in the grave pit next to the cremation urn, a grey ware jar, as was the case in Cremation 892 where the grey ware jar, acting as the cremation urn, contained a beaker alongside the cremated remains; two other accessory vessels – a complete samian dish and a ring-necked flagon – were set alongside in the grave fill. Likewise in Cremation 893 the cremation urn, a large grey ware jar, contained a small jar as an accessory vessel alongside the cremated bone.

The two box burials contained a wider variety of accessory vessels. In Cremation 902 the four accessory vessels were placed inside the box, alongside the cinerary urn (itself a beaker, rather than the standard grey ware jar); these comprised another beaker, a London

Ware bowl (which may have been several decades old), an everted-rim jar and a complete samian dish. In Cremation 905 it was uncertain where the cremated remains had been placed, but the small carinated beaker, placed against the side of the box, was probably an accessory vessel. (The early date of this cremation, of the later first century AD, distinguishes it from the later and more elaborate Cremations 902 and 903.) The casket burial, Cremation 903, was even more elaborate: although it was uncertain where the cremated remains were placed, the eight vessels comprised three bead-rimmed dishes, a poppyhead beaker, a high-shouldered jar, and three complete samian dishes.

The cremations of Cemetery II, therefore, show a considerable amount of variation in their vessel furnishing. In southeast Britain in the second century there was a distinct preference for vessel combinations of the jar/flagon-beaker-dish type (Philpott 1991, 35), yet in Mucking Cemetery II only one cremation, Cremation 892, conformed to this pattern. As this is thought to represent, alongside the funerary jar, a standard Romano-British table setting (*ibid.*), the variation seen here is intriguing, and must reflect alternative views on what provisioning needed to be taken to the grave, and thus possibly local ways of preparing and presenting food. In some graves, however, the vessels cannot have been used as containers for food or drink: the inversion of the dish in Cremation 885, to act as a lid for the cremation vessel, by necessity means that it cannot have held a food offering.

Several of the jars employed as cremation urns in Cemetery II were poorly made, while the beakers in Cremation 885 and Grave 901, the small jar in Cremation 791 and the jar, beaker and dish in Cremation 903 were all probably seconds. Jones (2003, 21) has identified a number of sites where wasters or seconds were used as cremation urns; these include Ospringe and Welling in Kent, Kelvedon in Essex, St Pancras in Chichester, Skeleton Green, Alton, Silchester and West Tenter Street, London. To this list can now also be added the cemetery at Wallington Road, Baldock (Burleigh and Fitzpatrick-Matthews 2010) and the accompanying vessels in some of the cremation burials at Broughton (Atkins *et al.* 2014, 220–1).

Grave-goods with Vessel Cremations

Eagle-headed finials like that in Cremation 902 (Fig. 4.40) are relatively common finds in mainland Europe, concentrated along the Rhine/Danube frontiers and are thought to be elaborate cart- or wagon-fittings, probably used to loop reins around when stationary (von Mercklin 1933; Alföldi 1935; Toynbee and Wilkins 1982, 249; Crummy 2000); however, these objects are known from only a small number of sites in Britain. These include Colchester, Kettering,

Cirencester, Silchester, Water Newton, Leicester, Wroxeter and Ixworth. Webster remarks of these objects that 'their striking uniformity strongly suggests a military origin and probably a first century date' (1960, 74, no. 37). The example from Little Cressingham, (Norfolk) is dated to the second or third centuries AD, although these objects have been found in fourth-century contexts in eastern central Europe (Painter 1971, 324, pl. LXVIII). Further examples are also known from villa and military sites, such as Walesby, Lincolnshire (Ambrose 1978), High Rochester (Toynbee and Wilkins 1982) and Shudy Camps, Cambridgeshire (C. Going pers. comm). A very similar, almost identical eagle head finial, dated to the first century AD, is reported in the Portable Antiquities Scheme Annual Report (2006, 48) from West Ilsley (Berks.), with a further three examples, two from Suffolk (PAS ref: SF-97C2C8; SF-9CC792) and one from Sussex (SUSS-18A703), also recorded by the scheme. An unusual find in a cremation burial, this was perhaps an heirloom.

A possible *tintinabulum* (part of a wind chime) was found in Cremation 905, comprising a thin copper alloy bell-shaped piece 27mm in diameter and 15mm high. While no direct parallels are known, bells were occasionally found in inhumation burials, and may have had an amuletic function. An iron bell was found in Burial Group 11 at St Pancras, Chichester; this was said to be the grave of a child, and the bell assumed to be a plaything (Down and Rule 1971, 91). Other examples of bells in fourth-century inhumation graves were seen at Butt Road, Colchester (Crummy *et al.* 1993, 155). Musical instruments may have been used in religious ceremonies in an apotropaic manner (Philpott 1991, 163). A pair of cymbals found in Grave 77 at Kelvedon (Rodwell 1988, 47) may represent a similar grave-good.

The function of the copper alloy tube in Cremation 885 is not clear. With its overlapping tubular sections, it could clearly have contained needles or other instruments, but nothing was found inside. The inclusion of items of toilet equipment and of textile-related equipment is well documented from Romano-British cremations (cf. Philpott 1991, 182–5), and this may represent one or the other. A very similar item accompanied Grave 723 at Butt Road, Colchester, which probably dated to the fourth century: its function was thought to be cosmetic, prophylactic, or possibly religious (Crummy *et al.* 1993, 155).

The Possible Epula – Cremation 911

Cremation 911, with its collection of lamps, pie-dishes, *tazze* and

beakers is an intriguing feature. Its identification as an actual cremation burial is uncertain: there is a brief mention in the site records of some burnt bone being associated with it (notes located with the finds state 'Very few crem bones' and 'HB in pit'), but no identification of human bone was made and this feature may, therefore, have represented a food offering (with hazelnuts and dates represented). The inclusion of *tazze* – apparently used for burning incense – alongside the lamps strongly suggests elements of a purification ritual (Philpott 1991, 192). The discovery of Mediterranean pine seeds in the charcoal associated with this feature might also imply the use of aromatic scents (*ibid.*, 195) and certainly its charred date stones amount to an extraordinary find. *Firmalampen* of the Mucking type are mainly found at military and urban sites, and display little penetration into the countryside (Eckardt 2002, 48). Although 85 have been recorded in total from burials, just a handful are known from rural or villa burials, including Boxmoor and West Mersea (*ibid.*).

Eckardt (2002, 106) argues that the handful of burials known to contain both lamps and *tazze* (as here at Mucking) probably reflect a very specific burial rite. That at Great Dover Street, Southwark (*cf.* Mackinder 2000, 10–13, 27–8, 33–7) had eight lamps of Central Gaulish White Ware and eight Verulamium Region White Ware *tazze*, none of which showed signs of burning or deliberate breakage; this grave also contained a range of plant remains including stone pine, date, fig, almond and cereal grains which (with the exception of the pine cone) may have related to a funerary meal, as might the remains of an almost complete adult chicken. This grave contained the cremated remains of an adult female, and was interpreted as a possible *bustum* grave dating to AD 50–130 (although the sides of the pit itself were not scorched, and only small fragments of charcoal were recovered). Grave 50 at Baldock contained 31 lamps and 15 pedestalled cups (Eckardt 2002, 109); they accompanied cremated juvenile remains, and the lamps may have been made specifically for the burial. A coin dated the burial to after AD 270. The Mucking deposit therefore sits between these two comparanda in chronological sequence, and displays elements of each. It remains unclear whether this was a cremation burial, or whether it represents something else. Of the ritual significance of the find Miranda Green has commented:

The deposit in Cremation 911 contained a remarkable collection of ceramics, and, indeed, organic material, which had survived by being burned within the pit itself. There seems little doubt that the deposit is associated with one of the rituals connected with the commemoration of the dead (for example, the *Floralia*, or the *Parentalia*), often marked by the consumption near the grave of the

dead person of a ritual meal, and the deposition of the food and drink afterwards in a pit.

Alternatively the find may represent a *favilla*, a sacred disposal pit containing the remains of a burnt down shrine (R. Reece, pers. comm.). In this capacity it also relevant to mention that, although not including lamps, the backfill of one of the graves in the recently excavated Pepper Hill cemetery in Kent apparently included a range of broken drinking- and eating-related pottery vessels – this being aside from the burial's seven accompanying grave-goods pots – and which was interpreted as reflecting a funerary feast (grave group 450: Booth *et al.* 2011, 323, figs. 5.15 & 5.52). It also included charred remains of imported plants and fruits; in addition to a possible fig fruit, this included the flesh and pips of grapes (Booth *et al.* 2010, 321; Andrews *et al.* 2011, 239).

Box and Casket Burials

Philpott, in his discussion of box and casket cremations (1991, 12–21) distinguishes between the two on the basis of size, and by the quality and range of associated fittings: caskets are identified where the container measures $0.3 \times 0.25 \times 0.15\text{m}$ or smaller (using Borrill 1981, 316–8), and where decorative bronze fittings can also be used. Caskets often held the cremated remains, as well as small gravegoods such as coins or lamps. Boxes tend to be larger, less elaborated, and contain all or most of the grave deposit, including the cremation urn and accessory vessels. In the case of Mucking Cemetery II, there are two boxes and a casket (which itself was in a cist), associated with three of the burials – Cremations 902, 903 and 905 – and one may also have been present in Cremation 885, as nails and a riveted iron plate fragment were found in the grave fill, but as little evidence was recorded this cannot be discussed further (Fig. 4.47). (The box burial from Mucking Cremation 909 listed in Philpott 1991, table 2 is here reinterpreted as a child's coffin due to the lack of accessories and of any human bone; Philpott's table also lists the dimensions of the cist from Grave 903, rather than the casket within it.)

Below, Quita Mould discusses Cremation 903's wooden cist and casket, and Cremations 902 and 905's boxes:

Cremation 903 lay within a timber-lined cist visible as a stain during excavation, and had a small casket placed along with the accompanying ancillary vessels. The iron in this burial had been recorded to quite a high level, with individual numbering of nails and fittings, and locations marked on the finds bags, if not always on the plans. Fifty-one nails were recorded. On examination, these items were found to include both iron fittings from the casket and

hobnails. The timber lining of the cist ($1.07 \times 0.92\text{m}$ and 0.33m deep) had been nailed at the corners using nails 66–76mm long. Minerally preserved organic remains were present on 15 nails, the five wood joints present suggesting timbers 15–25mm thick. Within the cist was the stain of a small wooden casket, its dimensions ($330 \times 230\text{mm}$) being similar to the caskets from Skeleton Green, Herts., but slightly larger than that from Springhead, Kent and Mansell Street, London (Watson 1997, 4, table 1). The lid of the casket had opened by way of a pair of simple hinges each comprising a nailed strap, over 100mm long and 17mm wide, articulating with a split-spiked loop. Fragments of narrow, plano-convex sectioned binding present are likely to come from small angled corner bindings. The only items specified as coming from the ‘inner box’ were three small clusters of hobnails; a further 10 hobnails were found outside, suggesting possible disturbance in this area. No individual nails can be directly associated with the casket from the location provided on the nail bags and it may be that the casket was of jointed construction. While no remains of an iron lock-plate were present, an ‘L’-shaped tumbler lock key, 121mm long with a round-sectioned handle, rolled ring terminal and two-toothed bit, accompanied the casket. All the accessory vessels were placed outside the casket, within the area of the cist.

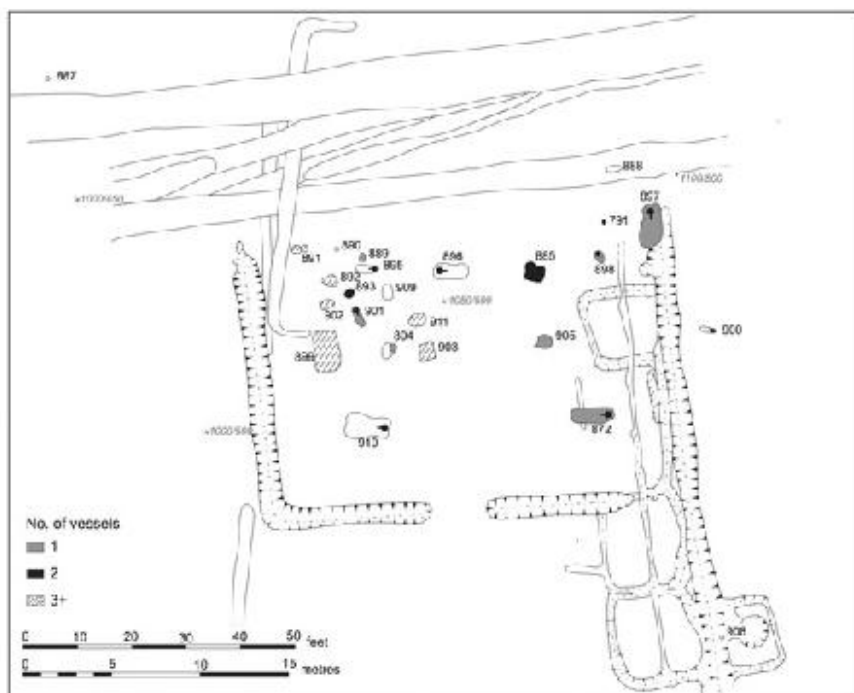
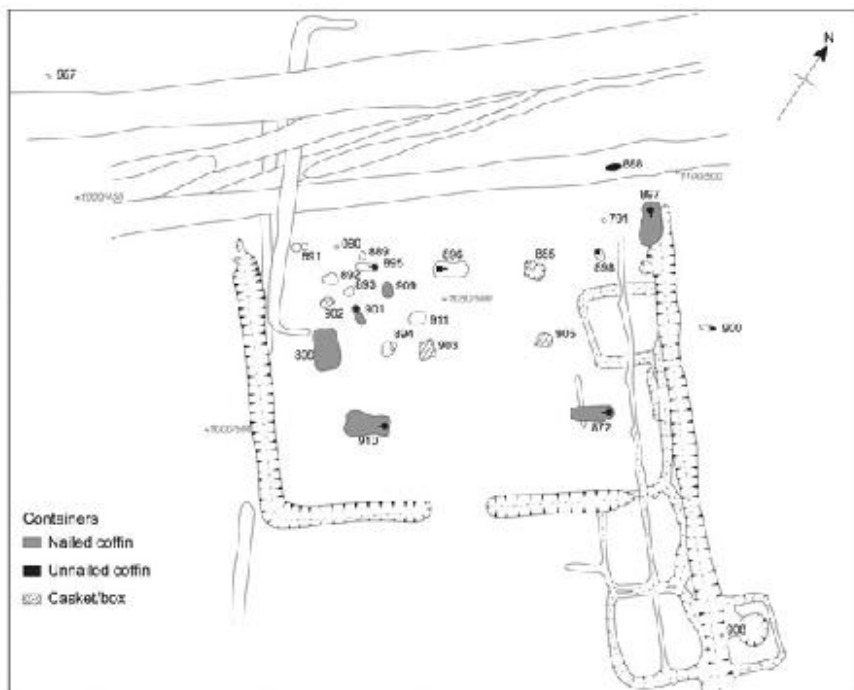


Figure 4.47. Plan of Cemetery II showing location of coffins, casket and box burials (upper); below, plan showing number of vessels per grave.

The wood stain from a box was seen in two other cremation burials studied (Cremations 902 & 905); in both these graves the entire burial deposit was contained within the box. Cremation 902, that of an adult male, had the cremation and ancillary vessels placed within a square wooden casket (310 × 280mm deep). Seven nails were recorded from the burial casket; six are shown on plan at the corners but only five were seen. The small nails, the largest 64mm long, had minerally preserved wood remaining, the two surviving joints indicating timbers 14mm and 25mm thick. The wood stain from a square box (510 × 300mm deep) was seen within Cremation 905. The nails were small and appear displaced; the single wood joint preserved suggested a timber thickness of 20mm. They were accompanied by fragments of strap, 33mm wide, presumably part of a hinge or hasp.

Philpott, in his discussion of Romano-British box burials (1991, table 2), lists 20 known examples of box burials with recorded dimensions (although these include Mucking Grave 909 and the box within the inhumation Grave 74 at Kelvedon). Further examples are now known from four burials at Stansted Airport (Havis and Brooks 2004, 214: Cremations 20, 24, 25 & 26) and five from Broughton (Atkins *et al.* 2014, 245). In terms of size, Mucking Cremation 902 is the smallest. The largest examples are those from the Bartlow Hills at over a metre in length and up to 0.76m deep; Cremation 25 at Stansted had a box of similar dimensions. Other examples from Skeleton Green, Baldock, Kelvedon, Braughing and Guilden Morden fall within the range outlined by Philpott. In terms of overall distribution, box burials are heavily clustered in southeast England, particularly in Essex and Hertfordshire (Philpott 1991, 17, fig. 2). While some boxes were elaborated to a degree, with bindings, hinges, escutcheons and lock-plates all known, others were evidenced only by iron nails, as here at Mucking, and some did not even have those (*ibid.*). Where the wood has been identified, oak was used (unfortunately, identifications of the wood used in the Mucking examples could not be located in the archive). Philpott (*ibid.*, 18–20) has identified three major regional groupings within the box burial rite: a grouping of particularly elaborate burials in Sussex around Chichester (often with large numbers of vessels, lamps, animal bones and hobnailed footwear), one in the southeast north of the Thames (into which the Mucking examples obviously fall), and those outside the southeast (typified by scarce grave furniture). The group from north of the Thames, while less coherent than those from Sussex, was characterised by Philpott as having a limited number of pottery vessels, with few other accessories.

To this end, he cited the box burials at Skeleton Green, of which there were nine, each being provided with between two and five vessels, these often comprising a large cinerary jar, a dish (often samian), and often a flagon, beaker, or both (Philpott 1991, 19). More recent finds have, however, added some variation to this: Cremation 25 at Stansted, for example, had over 20 pottery, glass and metal vessels arranged around a pewter tray (Havis and Brooks 2004, 216–27).

The box burials were some of the most richly furnished in Mucking Cemetery II: Cremation 902 contained five pottery vessels, as well as the eagle-headed finial or chariotfitting; Cremation 905 had just one vessel, alongside the possible *tintinabulum*, and seems to have been earlier in date. These associations strongly suggest that box burial was reserved as a higher status rite within the cemetery here. There was, however, no obvious clustering of these three graves within the cemetery and they were spread out across it (although the fact that these are the only box burials at Mucking may in itself suggest a clustering within the settlement as a whole). It is not possible to establish a correlation with age or sex (at least from the available evidence): while Cremation 902 was identified as an adult male, the majority of the cremation burials in Cemetery II were also identified as adults (in fact, none were positively identified as children or sub-adults), and no significance can be placed on this.

Most recorded examples of box burials date to the mid– late second century, but they also carried on into the third century, and are occasionally found to be earlier (Philpott 1991, 17; Atkins *et al.* 2014, 245). These Mucking examples range in date from the later first century (Cremation 905) to the later second to earlier third century (Cremation 902, although a much older London Ware bowl was included in the grave assemblage; it is possible that the beaker in Cremation 905 was also an older item when buried). It is interesting that Philpott (1991, 20) notes the apparently complementary distribution of cemeteries with box burials and those with amphorae burials, suggesting that these are equivalent rites. It is true that Mucking has no examples of amphorae burials; it apparently falls into the camp of those communities that chose box burial instead.

Table 4.8. Summary of burial attributes for Cemetery II inhumations.

Grave No.	Sex	Age	Grave L.	Grave W.	Grave D.	Orient	Container/Marker	Coffin L.	Coffin W.	Coffin D.	Head to	Position	Footwear	Vessels	Other ornaments	Date
872	?	Adult	2.50	0.97	0.46	NE-SW	Nailed coffin	1.83	0.61	0.28	NE	Supine Ext	N	1		AD 120/130-250
886	?	Child	1.07	0.46	?	NE-SW	Unnailed coffin	1.02	0.38	?	?	?	N	0		?
895	?	Child	1.57	0.58	0.41	NE-SW	None	-	-	-	NE	Supine Ext	N	0	2 bracelets	?
896	?	Adult	2.67	1.08	0.33	WSW-ESE	None	-	-	-	WSW	Supine Ext	N	0		?
897	?	Adult	2.43	1.35	0.81	NW-SE	Nailed coffin	1.83	0.98	0.40	NW	?	N	1		AD 110/130-200/210
898	?	Child	0.84	0.38	0.25	NW-SE	None	-	-	-	NW	?	N	1		AD 150-180
899	?	Child	2.13	1.22	1.02	NNW-SSE	Chamber + Nailed coffin	1.58	0.79	0.46	?	?	N	11		AD 150-200
900	?	Child	0.76	0.46	0.35	NE-SW	None	-	-	-	NE	?	N	0		?
901	?	Child	1.52	0.61	0.38	NW-SE	Nailed coffin	?	?	?	NW	Supine Ext	N	1	1 bracelet	AD 160-220
909	?	Child	1.22	0.89	0.53	NNW-SSE	Nailed coffin	0.71	0.30	0.23	?	?	N	0		?
910	?	?	2.64	2.37	0.81	ESE-WSW	Nailed coffin	1.83	0.61	?	ESE	Supine Ext	N	0	Accessory box	3rd century AD

The casket burial, Cremation 903, with its eight accompanying vessels, appears to be of even higher status than the box burials, and of possibly slightly earlier date, (later second century). True casket burials (where the casket is presumed to contain the cremated remains, and other grave-goods and accessory vessels are placed outside of this) are known from a variety of sites in southeast England, including King Harry Lane, St Albans; Skeleton Green; Great Dunmow; Colchester and Chichester (Borrill 1981, 316–7; Wickenden 1988, 12–22). More recently excavated examples are now known from Stansted (Havis and Brooks 2004), Elsenham (Havis and Medleycott 1992) and Broughton (Atkins *et al.* 2014, 245). The earliest examples are those of the mid first century AD at the West Cemetery of Colchester; later first-century examples feature bronze rings and lion-headed mounts, such as that in Burial 4 at Cemetery ‘A’ in Puckeridge (Borrill 1981, 316–17), although the casket in Cremation 17 at Stansted, also of this date, is not so elaborate, featuring just a lock-plate and cornerbrackets (Havis and Brooks 2004, 209–10, fig. 140), and nor is the plain casket burial 306 at Broughton (Atkins *et al.* 2014, 245). Earlier second-century casket burials from Great Dunmow range from simple fittings in Graves 10 and 18 to the elaborate casket in Grave 2 (Wickenden 1988, 12–22). Later second-century examples from Puckeridge are all richer than the box and urned cremations in the same cemetery, but several had just simple iron hinges and corner plates (Borrill 1981, 316–7). Cremation 903 at Mucking, with its mid to later second-century date, falls clearly into this later group with simpler fittings.

It is of note that the casket burial was the only cremation in Cemetery II to have been provided with hobnailed footwear (a single residual hobnail was also recovered from inhumation Grave 897): associated with leather, at least 13 hobnails represent (presumably) a pair of shoes placed inside or on top of the casket. The only other parallel for this seems to be Burial 35 from Skeleton Green, which had hobnailed footwear outside the casket (Partridge 1981, 262);

otherwise, no nailed shoes have been associated with casket burials (although unnailed shoes cannot be discounted).

Of Cremation 903's footwear Mould comments:

It would appear that the shoes had been placed in the grave and had not been worn on the body when cremated or placed with it on the pyre. There is no recorded indication that the hobnails had been burnt as would be the case had they been amongst the cremated remains subsequently collected for burial as seen at the third-century Roman military cemetery at Brougham (Mould 2004, 391–2). Three clusters of hobnails (two hobnails encrusted together, and two clusters of three) were the only items recorded from within the Mucking casket, while further single examples were found outside the box, suggesting that the shoes had been inside the casket or placed on the lid. The small number of hobnails suggests a lightly nailed shoe that, while intended to be worn outdoors, was not for heavy use. Nailing that includes decorative clusters of three nails scattered across the sole is known from elsewhere. It occurs on a nailed shoe with a closed upper of goatskin from the later third- to fourth-century Well 1 at the villa at Dalton Parlours, Yorkshire (Mould 1990, 235 and fig. 142, 11) and on shoes from the third-fourth-century cemetery of Krefeld Gellep (van Driel-Murray 2001, 252, fig. 22f) for example.

Overview – Inhumation Burials

Eleven of the burials in Cemetery II were definite or probable inhumations (Table 4.8; see Fig. 4.46). One, Grave 909, had no human remains present, and there is some confusion in the archive whether its associated ironwork represented a child's coffin or a (cremation) box burial. As well as the absence of human bone, the lack of grave-goods suggests the former, as the other box burials in the cemetery all contained at least one cinerary or accessory vessel (see above).

Coffins and the Chamber Grave (Quita Mould)

One unusual feature was the use of a wooden chamber in Grave 899, as well as a nailed coffin. In total, 127 nails were recorded from this burial; all had minerally preserved wood remaining, with 39 wood joints present. There is no record of the wood being identified to species. The nails were individually numbered but this numbering was not noted on the grave plans, though basic positions and depth were noted on the nail bags. Occasionally, nails were described as coming from the 'inner' or the 'outer' coffin, allowing those from the chamber lining and the coffin within to be distinguished. Two sizes of timber nail were present (roughly 34–69mm and 70–104mm), the larger

apparently used in the chamber construction. The timber lining appears to have been constructed like a large box nailed at the corners, with timbers 33–35mm thick. The wood joints suggest that timber of similar thickness was used to construct both the chamber and the coffin. The range of timber thickness preserved in the wood joints is wide: one example just 5mm thick was present, but the rest varied from 10–39mm. It was noticeable that the thinner wood (10–18mm thick) occurred on vertical nails that may have come from the coffin lid or the plank roof of the vault.

Wood stains indicated further coffins in Graves 897 and 910 (see [Fig. 4.47](#)). The oak wood coffin in Grave 897 had been heavily nailed at the four corners, the two southern corners having seven nails each, that in the northwest appearing to have as many as 14. Wood joints present on 18 of the nails indicated that the timbers had varied in thickness from 18–33mm. The limited number of small, broken nails recovered from Grave 910 do not appear to be part of the coffin construction and are perhaps more likely to have come from a small casket whose decorative copper alloy handle was present in the fill. Three broken nails in Grave 901 may come from a nailed coffin but, unusually, no staining from the coffin was observed during excavation.

The 21 nails used in the construction of the rectangular wooden box (710 × 300 × 230mm deep) within Grave 909, principally at the corners, were large with complete examples being 76–83mm long. The seven wood joints suggested that timbers of 16–25mm thickness were used. A high percentage (six examples) of nails with clenched shanks were present, possibly suggesting the use of salvaged timber. The Corbridge chest was of similar rectangular shape to that in Grave 909, though of greater dimensions (880 × 580 × 410mm deep) and constructed with sophisticated joinery. The dovetail joints on the Corbridge chest had suggested that at least one of the alder (*Alnus* sp.) planks used was 17–18mm thick (Watson 1998, 95).

Table 4.9. Pottery vessels in Cemetery II.

Grave/Crem	No. pots	Local	N. Kent	Other	Samian
791	2	2			
872	1	1			
885	2	1	1		
889	1			1	
891	3	3			
892	4	2		1	1
893	2	1	1		
894	1	1			
896a	3	1		2	
897	1	1			
898	1				1
899	12	3		2	7
901	1	1			
902	5	1		3	1
903	8	5	1		2
905	1		1		
911	17	9		8	
TOTAL	65	32	4	17	12

Grave Elaboration

The provision of a chamber grave (No. 899) appears to have been a high status rite afforded to the burial with the most accessory vessels – 11 in total. The chamber itself measured $2.13 \times 1.22\text{m}$ in area, and was 1.02m deep, making it the deepest grave in the cemetery (the grave cut itself appears not to have been observed, so the nails associated with the chamber were found at the corners of the dug grave). Could this be a regional practice? Six similar chambers were reported from Site J, Kelvedon, associated with confined burials, and two abnormally large grave pits suggest a further two unconfined examples (Rodwell 1988). Here, the grave pits were lined with a wooden framework jointed or wedged in position, or retained by vertical posts; they ranged in size from $2.1 \times 0.9 \times 0.9\text{m}$ deep (Grave 33) to $2.9 \times 1.8 \times 1.1\text{m}$ deep (Grave 56; Rodwell 1988, 37–41, table 2); the use of chamber graves at this site dates from the later third century onwards. At Butt Road, Colchester a further six chambers were discovered, similarly late in date (Crummy *et al.* 1993, 111–14). Other examples are known from Hampshire and York (*cf.* Philpott 1991, 70). Grave 899 at Mucking, however, would appear from its associated pottery to be at least a century earlier than the earliest example at Kelvedon, and the origins of this tradition, especially its association with a child's grave, remain unknown.

Use of Grave-goods

As noted above, the most elaborately furnished grave was Grave 899. Ten of the vessels were placed outside the coffin, in a line between the (probable) left hand side of the coffin and the inner chamber lining; a

further vessel lay inverted over the head, and one may have been set upon the coffin lid (if not a later insertion).

Also unusual is the inclusion of an accessory box with Grave 910. This, although apparently disturbed, seems to have been placed at the foot of the coffin, and outside it. The copper alloy handle decorated with opposing dolphins was found 'in the fill of the grave' above the body's right hip. Although this was published as a helmet-carrying handle (Jones 1975–1976, 37), its attribution to a casket is thought more probable here. Other dolphin handles are known from Caerleon Canabae (Lloyd-Morgan 2000, 352–353, fig. 84 nos. 36–38), Fishbourne (Cunliffe 1971, 118, fig. 48 no. 127) and Gadebridge Park (Neal 1974, 132, fig. 57 no. 72). A further fragment of the tail of such a handle is known from Puckeridge-Braughing (Potter and Trow 1988, 66, fig. 28 no. 108). In this grave it may have been associated with the two annular studs found at the foot-end. The stain of the box/casket indicated dimensions of 0.52m long and 0.31m wide (depth unknown). The only possible known parallel to this comes from Grave 74 at Kelvedon, where a nailed wooden coffin had a partition towards the head end of the grave that separated an urned cremation burial with five accessory vessels from the inhumation. The grave dated to the late second century (Rodwell 1988, app. 1.B3–4) and may, therefore, be contemporary with Mucking Grave 910.

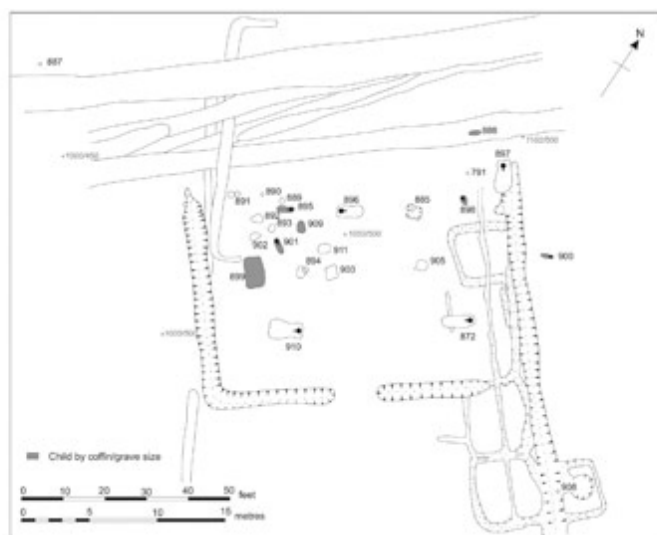


Figure 4.48. Plan of Cemetery II showing location of possible child burials

Pottery (Joanna Bird, Brenda Dickinson and Rosemary

Jefferies)

The pottery from Cemetery II is of better quality than that from Cemeteries I, III and IV. There are 15 cremation burials, 12 of which contained pots, plus 12 inhumations, six with pots ([Table 4.9](#)). Although Mucking kiln products accounted for 50% of the vessels, only 6% were from North Kent. Samian vessels made up 19% (the highest proportion of any of the Mucking cemeteries) and the 24% from other sources included colour coat beakers, probably from Colchester; a London Ware bowl, *tazze* and flagons are from the Walbrook valley. The date range of the vessels from this cemetery is AD 50/60–250.

The Mucking kiln products included shallow dishes and storage jars. Like Cemeteries I, III and IV, truncated jars or storage jars were used as cremation urns. Cremations 891, 892, 893 and 894 (all in the southwestern part of the cemetery) had truncated storage jars, all made in GVC fabric, which may represent the use of jars damaged during firing or re-used vessels. Grave 899 had two shallow beadrimmed dishes of the same size, whereas Cremation 903 had three similar dishes but of varying sizes. Cemetery II produced a total of eight bead-rimmed dishes in BBT2 fabric or GRY, which were all locally made. Ring-necked flagons occurred in Cremations 889 and 892 with a further two in Grave 899, all of which were in VRW fabric. Ring-necked flagons are common in cemeteries in Essex, Kent, London and Hertfordshire. The north Kent products included poppyhead beakers in Graves 885 and 903, both of which were seconds. Many of the locally made vessels were also seconds. The *tazze* from Cremation 911 may be compared to those from Great Dover Street, Southwark, although there were more vessels from Mucking's Cremation 911, of which four were local products.

All of the samian vessels in Cemetery II were plain forms, and many showed signs of considerable wear before deposition, including the two unstamped Rheinzabern vessels that date from the first half of the third century (Drag 33 from Grave 899, Drag 38/Ludowici Si from Cremation 892). Two pairs of stamps were seen among the burials: Tituro of Lezoux (Nos. 58 and 59, both die 5b, on Ludowici Tg and Tx from Grave 899 and Cremation 903), and Vagi-ro/Vagirus of Lezoux (Nos. 62 & 63, both die 7a, on Walters 79 and Drag 31 from Graves 898 & 899). The other stamped vessels came from Lezoux (No. 2, Aestivus on Walters 79 from Grave 899), possibly La Madeleine (No. 30, Glosabinia on Drag 18/31 from Cremation 903, and no. 55, Remicus on Drag 33 from Grave 899), the Argonne (No. 24, Decmus iv on Drag 18/31 from Grave 899), Trier (No. 39, Mainina on Drag 33 from Grave 899) and Colchester (No. 23, Cunopectus on Ludowici Tx variant, from Cremation 902).

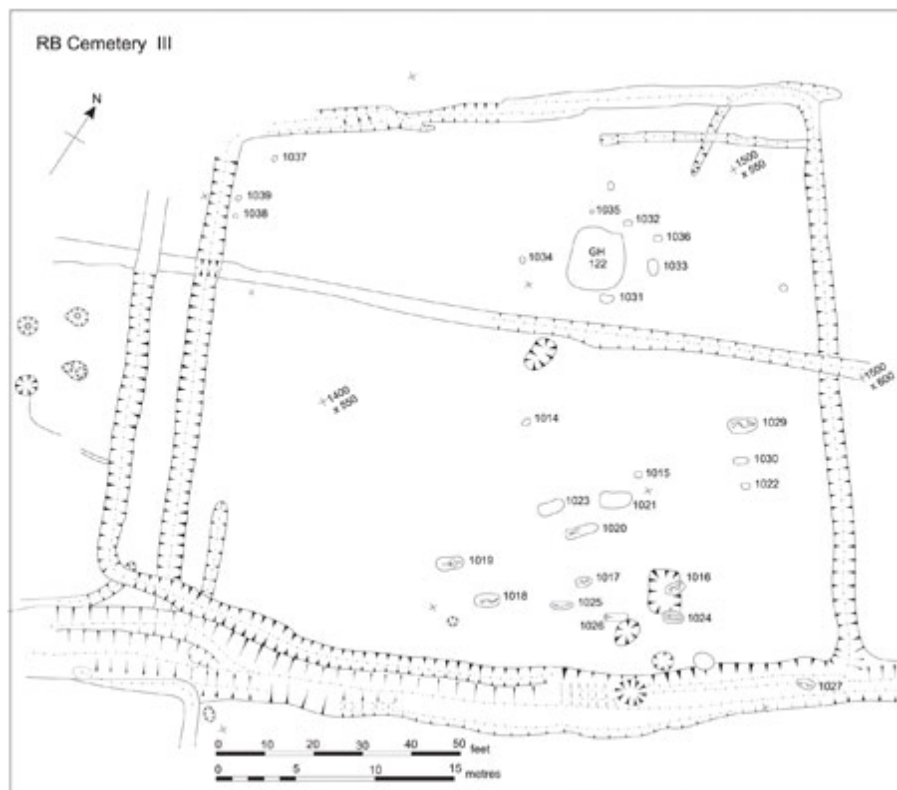


Figure 4.49. Plan of Cemetery III.

Age-related Burial Practices

A high proportion of the inhumations appeared to be those of children. The size of the body stain or silhouette indicates that they were interred in Graves 895, 898, 899, 900 and 901, while the size of Graves 888 and 909 suggests this also. With the exception of the richly furnished Grave 899, all these graves measured less than 1.37m in length, with most being substantially shorter. There appear to be some distinctions in the way that adults and younger burials were buried. Three of the four probable adult graves were interred in nailed coffins (only Grave 896 was uncoffined). Intriguingly, these three coffins were of virtually the same size, 1.83m long, and 0.59–0.61m wide. Where evidence was available, these burials were supine and extended, and either lacked grave-goods or were provided with just a single pottery vessel (a local jar, placed at the feet inside the coffin in Graves 872 and 897, dating them to the second/ early third century).

In contrast, the younger burials had more variable furnishing. Grave

888 contained an unnailed coffin, and Graves 899 and 909 had a nailed coffin, but otherwise coffins were not used (although three large nails in Grave 901 might be the remains of one). Aside from the elaborate Grave 899, two burials had a single pottery vessel present: Grave 898, a samian dish placed over the chest, and Grave 901 a crudely bossed beaker (these both probably later second-century in date). This grave also had a copper alloy wire bracelet, and the individual in Grave 895 was buried with two bracelets (one penannular, and one now lost, for which no details are known); these two burials were the only inhumations in Cemetery II to have personal ornaments used as grave-goods. It may be significant that the child graves with vessels and personal ornaments did not tend to be those with coffins (though, Grave 901 may be the exception here).

Orientation Groups

One aspect of the burial rite not apparently affected by age was orientation of the grave and the body. Two main orientations were apparent: predominantly NE–SW and NW–SE. Six burials in the former group comprise three adults and three children: five of these had heads to the NE (Grave 872 being indicated wrongly on the site atlas) and just one, Grave 896, to the SW: this was also the only uncoffined adult burial, and may have been marked out in the burial practice in more than one way. Of the five burials in the NW–SE group, comprising two adults and three children, the heads were all to the NW where noted. It may also be significant that four of these five burials were provided with pottery vessels, as against just one of the NE–SW group (Grave 872). There may have been a chronological distinction between the two groups: where dated, those in the NE–SW group are later third-century or later in date, while those in the NW–SE group are late second- or early third-century (see [Fig. 4.46](#)).

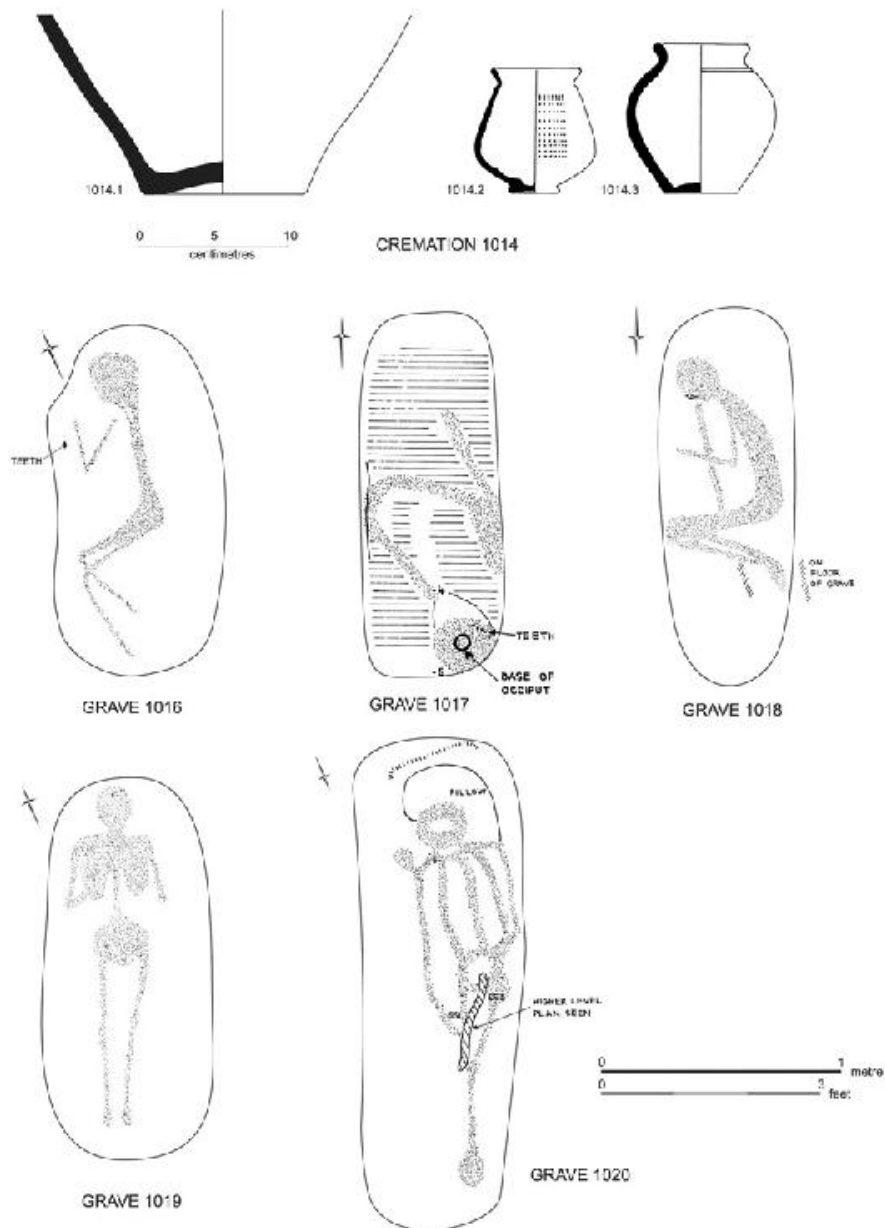


Figure 4.50. Grave-goods from Cremation 1014, and plans of Graves 1016, 1017, 1018, 1019 and 1020.

The 14 cremations and 11 inhumations of Cemetery II, along with the *epula* deposit, are varied in date. The deposit dates to the later second century, while several of the cremations (those within wooden caskets or boxes, along with accessory vessels and other grave-goods) were generally of mid first- to later second- or early third-century

date. The inhumations were more varied, ranging in date from the mid second- to the later third-century.

Cemetery III

Excavated in 1974, Romano-British Cemetery III contained 11 cremations and 14 inhumations (Fig. 4.49). While the cremation burials were identifiably Romano-British, the unaccompanied inhumations were of ambiguous date. This is explored further below, but the occasional use of nailed coffins suggests that they are probably contemporary with the cremation burials.

The cemetery lay within a rectangular NE–SWorientated Romano-British period enclosure, forming the large northern element of a paired enclosure, measuring 43.35m by 35.25m and aligned along the site's principal axis. The enclosure ditch (C1A) measured between 1.54m and 0.72m in width (ave. 1.25m) and between 0.5m and 0.28m in depth (ave. 0.4m). The inhumations are concentrated in the central eastern and northeast corner of the enclosure, with two discrete clusters of cremation burials in the northwest and southwest corners. The central southern area of the enclosure was devoid of inhumation or cremation burials, although this may reflect truncation during mechanical stripping of the site. Following presentation of the burial catalogue, the cremations will be discussed first, followed by the inhumations.

Grave Catalogue

Cremation 1008. (1430.5N/586.5E) Adult (Not illus.)

NB 259.159

Grave pit: No data: damaged by ploughing.

Pit fill: Only 5cm deep; charcoal and pieces of bone surrounded by red burned pebbles.

Grave-goods: Only the base of the presumed cremation urn survived: red/brown surfaces and light grey core.

Bone: Poor preservation; complete burning; white in colour; 45g; max L. 17mm.

Cremation 1014. (1433N/574E) Adult Female (Figs. 4.50 & 4.56; feature not planned)

NB 269.43

Grave pit: No data: damaged by ploughing.

Pit fill: No data.

Grave-goods: Three pottery vessels found, a – presumably cinerary – urn with ‘2 small pots inside’.

1014.1 Large closed form, probably a jar, no details preserved.

1014.2 Poppyhead beaker in GFN fabric (NK06); decorated with panels of barbotine dots. The rim is short and sharply everted (Rim 72mm; Ht 120mm; Base 60mm; EVE 1.0). This is an unusual form of poppyhead beaker. It is rare in London; the form was produced at Highgate, but in small numbers. Marsh and Tyers 111.F.4; AD 90/100–160. 1014.3 Small jar in GRY fabric (CK01; Rim 78mm; Ht 140mm; Base 64mm; EVE 1.0). This form occurs on a number of sites in the Thames Estuary and Essex; it is similar to Cam 221A. AD 110/20–200/10, as in later fabric.

Bone: Found in both pit and pot. Poor preservation, complete burning, white in colour, 195g, max L. 27mm.

Grave 1016. (1450N/620E) (Fig. 4.50)

NB 260.35, 83; 150B.109

Grave pit: Irregular oval, with vertical sides and flat base, measuring $1.52 \times 0.71 \times 0.48$ m deep, orientated NNE–SSW, cut by large pit that contained many flint-gritted sherds (probably MIA, but could also be Anglo-Saxon).

Pit fill: Light brown sand and yellow sand with some pebbles, both round and irregular, scattered randomly throughout the fill. Excavated in haste; too wet for photography. *Finds in fill:* Several slightly abraded flint gritted sherds (date uncertain).

Grave furniture: No data.

Grave-goods:

1016.1 [Not illus] Flint scraper.

Bone: Body silhouette only, showing flexed burial lying on its right side, head to north, facing right.

Remarks: Perhaps prehistoric.

Grave 1017. (1426N/609E) (Fig. 4.50)

NB 260.28–30

Grave pit: Rectangular grave with rounded corners, nearvertical sides and flat base, measuring $1.68 \times 0.76 \times 0.76$ m deep, orientated NNE–SSW.

Pit fill: Clean gravel and some small lenses of solid greybrown silt. Occasional flint-gritted sherds and flints in fill. *Grave furniture:* Rectangular black layer up to 5mm thick on whole floor of grave suggested that body may have been placed on a ‘mattress’ or unnailed wooden bier.

Grave-goods:

1017.1 [Not illus] Flint scraper (possibly residual).

Bone: Clear silhouette, indicating a crouched burial on the right side, with head to the north, facing right.

Remarks: Records better, but reveal a crouched inhumation that, like 1016, contained a flint scraper. This is perhaps also prehistoric.

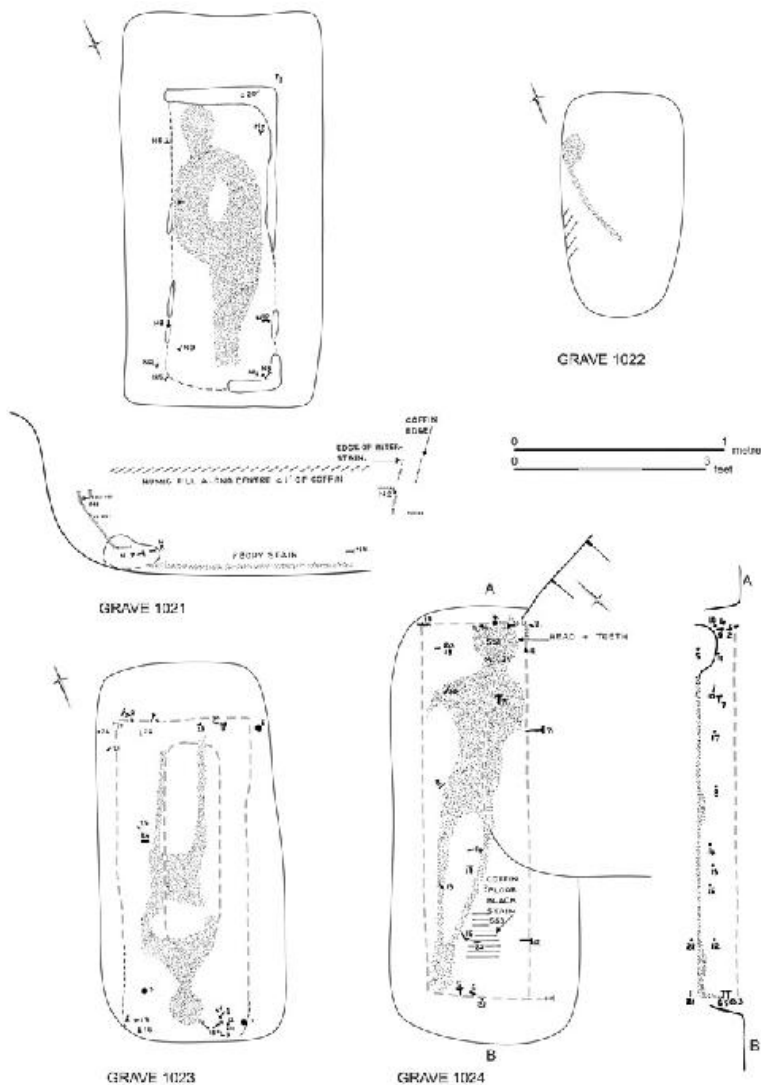


Figure 4.51. Plans and sections of Graves 1021, 1022, 1023 and 1024.

Grave 1018. (1410N/604E) (Fig. 4.50)

NB 259.130, 132-4; 260.31

Grave pit: Elongated oval grave with vertical sides and rounded base, measuring $1.68 \times 0.61 \times 0.76\text{m}$ deep, orientated SSW-NNE.

Pit fill: Orange sandy gravel, and medium brown sandy loam with few pebbles and sand lenses. Excavation hurried, in very damp conditions.

Grave furniture: Possible coffin stain, but no associated nails.

Grave-goods: None, although a linear stain under the body may suggest a decayed ?wooden artefact; definitely not a part of the putative coffin.

Bone: Body stain shows head and femora clearly and also suggests right arm. Body clearly tightly flexed and on its right side, with head to south, facing right.

Grave 1019. (1408N/593E) (Figs. 4.50 & 4.56)

NB 269.4

Grave pit: Rectangular with rounded corners, vertical sides and flat base, measuring $1.52 \times 0.86 \times 0.46\text{m}$ deep, orientated NNE-SSW. Cuts a large shallow pit 1410N/591E (undated).

Pit fill: Very sandy gravel with few pebbles.

Findings in fill: Flints, flint-gritted pottery scraps and an orange-red wheel thrown sherd, all thought to be residual.

Grave furniture: None.

Grave-goods: None.

Bone: Very clear body stain showing supine extended burial with arms bent (possibly crossed on chest), and head to north, facing up.

Grave 1020. (1438N/602E) (Fig. 4.50)

NB 269.8–9, 150B.113

Grave pit: Very long and narrow rectangular grave, with rounded corners, vertical sides and flat base, measuring $2.08 \times 0.66 \times 0.54\text{m}$ deep, orientated SSW-NNE.

Pit fill: Dark, compact fill (?topsoil), with small flecks of fired clay, overlying orange gravel with patches of topsoil. *Findings in fill*: Rim of a flint-gritted vessel with oblique fingernail decoration from top of grave fill.

Grave furniture: Slight traces of soil stain in the vicinity of the head, suggesting inhumation in a coffin (no nails observed). Also in the vicinity of the head a dark silty area, interpreted as turves, may have served as a pillow ($0.36 \times 0.23 \times 0.15\text{m}$ thick).

Grave-goods: None noted, save for a stain c. 0.46m long, above the body, the decayed remains of a bone? object.

Bone: Silhouette only, extended, supine inhumation with crossed legs, with head to the south, facing up.

Grave 1021. (1440N/596E) (Fig. 4.51)

NB 269.12–13

Grave pit: Rectangular with rounded corners, steep sides and flat base, measuring $1.83 \times 1.04 \times 0.7\text{m}$ deep, orientated SSW-NNE. Very wide for a grave.

Pit fill: Very dark brown sandy loam (topsoil?) with charcoal flakes

and patches of a more humic fill within the coffin stain. *Finds in fill*: Residual finds of c. 10 early IA B ring base vesicular sherds, and flint flakes.

Grave furniture: Coffin stain of a nailed oak coffin ($1.52 \times 0.52 \times 0.36\text{m}$ deep) with 11 nails.

Grave-goods: None.

Bone: Clear body stain with slightly irregular outline. Flexed on the right side, with head to the southwest, facing right.

Grave 1022. (1470N/609E) (Fig. 4.51)

NB 260.14, 36; 269.16, 150b.115

Grave pit: Oblong, and initially excavated as a pit until true shape became clear; sloping sides rounding to flat base. $1.07 \times 0.61 \times 0.3\text{m}$ deep, orientated SSW–NNE; thought to be a child's grave.

Pit fill: Lenticular fill with humic fill right against clean sandy side.

Finds in fill: Residual IA and RB pottery scraps.

Grave furniture: None.

Grave-goods: None.

Bone: Very faint silhouette of head and spine. Flexed on its left side with head to northeast, facing left.

Grave 1023. (1423N/593E) (Fig. 4.51)

NB 269.15; 150B.116

Grave pit: Rectangular, with rounded corners, vertical sides and flat base, measuring $1.83 \times 0.91 \times 0.39\text{m}$ deep, orientated SSW–NNE.

Pit fill: Blotchy and sandy, with a floor of very loose gravel. A narrow area of dark sandy loam along the centre of the grave possibly represents the remains of the coffin lid.

Finds in fill: Residual flint flakes and scraps of flint-gritted pottery.

Grave furniture: Clear rectangular coffin stain ($1.52 \times 0.61 \times 0.30\text{m}$ deep) and 26 nails; wood unidentified.

Grave-goods: None.

Bone: Some teeth and part of the occipital bone survived. Rest of body just a silhouette. Extended supine inhumation, with the head to south (facing up) right up against the end of the grave.

Grave 1024. (1439N/623E) (Fig. 4.51)

NB 261.81–2; 269.17; 150B.17

Grave pit: Rectangular with rounded corners, steep sides and flat base, measuring $2.07 \times 0.91 \times 0.31\text{m}$ deep, orientated SW–NE; cut by a flat bottomed pit 1441N/621E.

Pit fill: Dark fill within pit but outside coffin; some animal disturbance; many flint-gritted sherds, probably deriving from intercutting pit, or an earlier feature.

Grave furniture: Rectangular coffin stain ($1.73 \times 0.48 \times 0.27\text{m}$) with

Figure 4.52. Plans and sections of Graves 1025, 1026, 1027 and 1029.

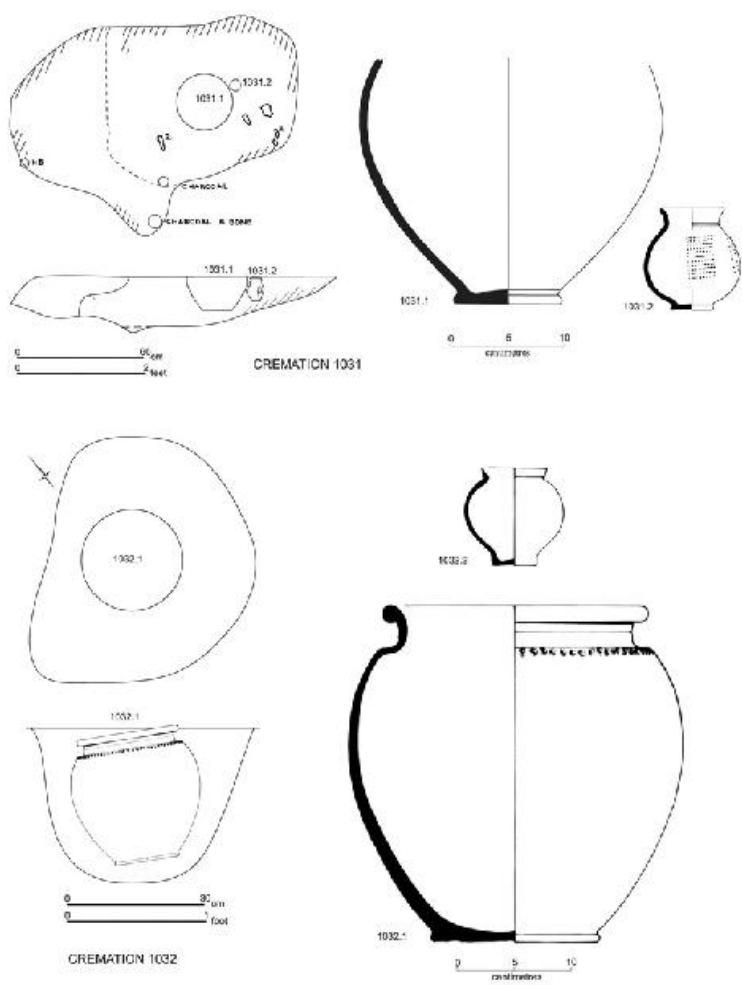


Figure 4.53. Plan, section and grave-goods from Cremations 1031 and 1032.

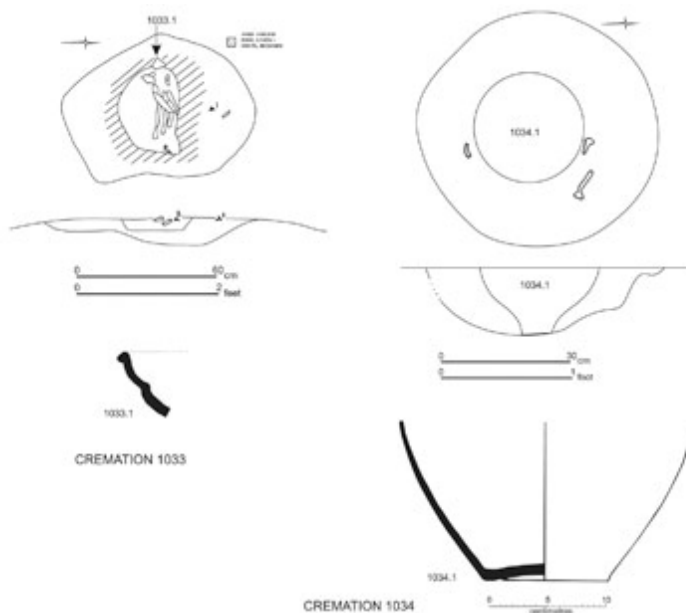


Figure 4.54. Plans, sections and grave-goods from Cremations 1033 and 1034.

Grave 1026. (1428N/618E) (Fig. 4.52)

NB 269.21

Grave pit: Rectangular with rounded corners, steep sides and flat base, measuring $1.83 \times 0.61 \times 0.46$ m deep, orientated SSW–NNE.

Pit fill: Sandy fill along one edge of pit, with a loam fill inside the pit, very humic throughout.

Finds in fill: A residual wheel-thrown pot rim, fresh and abraded flint-gritted sherds, a further possible wheelthrown sherd, a fragment of slag and some flint flakes, including a possible core and handaxe fragments.

Grave furniture: No coffin stain noted but two nails found. **Grave-goods:** None.

Bone: Parts of a body stain preserved, with some teeth, indicating a burial flexed on the right side, with head to the southwest facing right.

Grave 1027. (1459N/650E) (Fig. 4.52)

NB 261.127, 142

Grave pit: Oval, with sloping sides and flat base, measuring $1.14 \times 0.5 \times 0.2$ m deep, orientated SSW–NNE. Located in the bottom of the extension to the Central Enclosure, but quite late in the ditch fill, so of secure RB date: the grave cuts into at least two fills of the ditch, but is itself cut through by the later central recut of the ditch.

Pit fill: Dark loam.

Finds in fill: Flints and two scraps of residual flint-gritted pottery.

Grave furniture: None.

Grave-goods: None.

Bone: Body silhouette, showing burial flexed on the right side, with head apparently bent forward in order to fit into grave, head to southwest facing right.

Grave 1029. (1470N/595E) (Fig. 4.52)

NB 269.29;150B/5.122

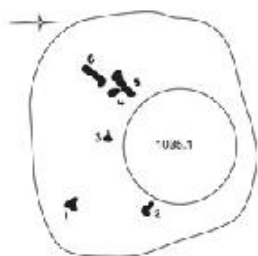
Grave pit: Roughly rectangular with rounded corners, vertical sides and flat base, measuring $1.68 \times 1.14 \times 0.51$ m deep, orientated NNE–SSW.

Pit fill: Patches of light brown silt and orange sandy gravel. *Finds in fill*: Residual finds of fired clay (possibly an IA loomweight), six flint flakes, vesicular sherds, wheelthrown sherds and abraded flint-gritted sherds.

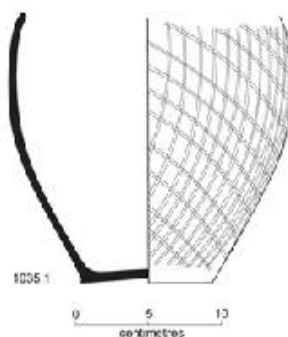
Grave furniture: None.

Grave-goods: None.

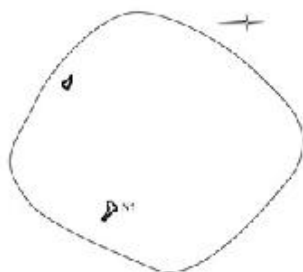
Bone: Body silhouette showing flexed burial lying on its right side, with both hands in front of the face, and head to north facing right. Some teeth and possible pelvic bone also survived.



0 30 cm
0 1 foot



CREMATION 1035

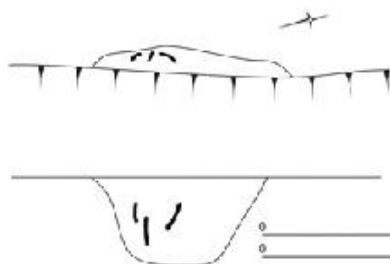


CREMATION 1036



CREMATION 1037

0 30 cm
0 1 foot



CREMATION 1038

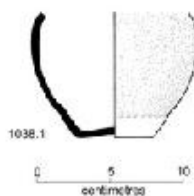


Figure 4.55. Plans, sections and grave-goods from Cremations 1035, 1036, 1037 and 1038.



CREMATION 1014



CREMATION 1032



GRAVE 1019

Figure 4.56. Photographs of Cremations 1014 and 1032 and Grave 1019.

Grave 1030. (1468N/603E) (Not illus.)

NB 269.31; 150B.123

Grave pit: Elongated oval grave, with steep sides and uneven base, measuring $1.06 \times 0.58 \times 0.36$ m deep, orientated SSW–NNE.

Pit fill: Patches of light brown silt and orange gravel, well mixed together making the fill generally quite dark.

Finds in fill: two residual flint flakes and some flint-gritted pottery sherds.

Grave furniture: None.

Grave-goods: None.

Bone: No silhouette visible.

Remarks: Despite no signs of a body, grave furniture or grave goods, this was thought to be a grave on the basis that it is close to and parallel with Grave 1029 and a similar shape to Grave 1022.

Cremation 1031. (1463N/559E) Adult Male (Fig. 4.53)

NB 269.32–33

Grave pit: Very irregular oval, with sloping sides to a pointed base, $1.37 \times 0.76 \times 0.25\text{m}$ deep. Some animal disturbance in the base.

Pit fill: Dark and charcoally fill with some large pieces of charcoal (including ash, oak and sloe) and small fragments of human bone, with blotchy patches of clean gravel, within a light brown pebbly loam containing shallow patches of dark charcoally fill and burnt bone. Reddened gravel around the edges and along the base of the pit may suggest burning. The two vessels were placed upright next to each other close to the centre of the pit.

Finds in fill: Residual flint-gritted and other pot sherds. Also two iron ? nail shanks lying flat in the fill.

Grave furniture: None.

Grave-goods: Two pots (1031.1–2) both containing a dark charcoally fill, and both with burnt bone below them. The larger vessel 1031.1 was the main cremation urn, with human bone found right the way through the fill, along with a small piece of fused glass and some ? horn.

1031.1 High-shouldered storage jar in GVC fabric. Rim and upper part of the body missing (Ht 245mm; Base 94mm). This is difficult to date with certainty, but the form is likely to be early. AD 50/60–120.

1031.2 Poppyhead beaker in GFN fabric (NM06), with neck cordon and turned base; burnished, with panels of barbotine dot decoration (Ht 89mm; Max girth 94mm; EVE 1.0). Southwark IIIF.6 Marsh and Tyers. AD 100–160.

Bone: Only small fragments of burnt human bone, found both within 1031.1 and underneath both vessels. Poor preservation, complete burning, white in colour, 1200g, max L. 67mm.

Cremation 1032. (1475N/549E) Adult Male (Figs. 4.53 & 4.56)

NB 150.125

Grave pit: Irregular oval pit with near-vertical sides and rounded base, measuring $0.56 \times 0.46 \times 0.33\text{m}$ deep. Pit was just large enough to take the main cremation urn 1032.1, which itself contained the accessory vessel 1032.2.

Pit fill: Light brown and very gravelly.

Grave furniture: None.

Grave-goods:

1032.1 Storage jar in GRY fabric (JB02). Figure-of-seven rim with thumbnail impressions on the shoulder (Ht 295mm; Rim 225mm; EVE 1.0). Rare but long-lived form originating in the Surrey/Hampshire Alice Holt potteries. This was made until the early third century at Alice Holt. Similar to Marsh and Tyers 11.D.1. AD 70–200+.

1032.2 Globular everted rim jar in VRW fabric (NB01; Ht 85mm; Rim 57mm; Max girth 86mm; Base 37mm; EVE 1.0). This form is unparalleled and therefore difficult to date; possibly second half of second century.

Bone: Cremated bone found inside cremation urn 1032.1. Poor preservation, incomplete burning, white in colour, 1300g, max L. 125mm.

Cremation 1033. (1475N/560E) a) Adult, b) Child (Infans I) (Fig. 4.54)
NB 269.27

Grave pit: Roughly rectangular with rounded corners, sloping sides and rounded base, measuring $0.80 \times 0.62 \times 0.18\text{m}$ deep.

Pit fill: Reddened edges, with an interior concentration of cremated bone overlying burnt gravel.

Finds in fill: Residual flint.

Grave furniture: Two iron nails at the surface of the concentration of bone.

Grave-goods:

1033.1 One sherd of samian ware, Drag 27, beside longbones. Mid first- to mid second-century AD.

Bone: Bundle of fairly large burnt bones placed at one end of the pit. Possibly laid on something, as a very clearly defined line between bottom of bone and burnt gravel. Both sets of remains displayed poor preservation, complete burning, white in colour. Adult: 800g, max L. 52mm; child: 22g, max L. 4mm.

Remarks: There is a possibility that the remains of a pyre were swept into the pit and the bones subsequently placed on top. Unlikely to represent burning *in situ* due to position of bundle of bones, which appeared to have been deliberately placed.

Cremation 1034. (1454N/543E) a) Adult Male, b) Adult Male (Fig. 4.54)

NB 269.36

Grave pit: Roughly circular with sloping sides and rounded base, measuring 0.61m in diameter and c. 0.16m deep.

Pit fill: Very dark brown and some oak charcoal and large quantity of bone; vessel placed upright in centre of pit. *Finds in fill:* one abraded flint-gritted sherd.

Grave furniture: three iron nails in fill outside the vessel may represent

the remains of a box or similar.

Grave-goods:

1034.1 Storage jar in GVC fabric; rim and the upper half of the body are missing (Max girth 238mm; Base 106mm), containing charcoal, human bone and possible fused glass. Long-lived form.

Bone: Cremated human bone fragments, apparently representing two adult male individuals. Both displayed poor preservation, complete burning, white in colour: (a) 539g, max L. 64mm (b) 870g, max L. 52mm.

Table 4.10. Summary of burial attributes for Cemetery III cremations.

Cremation No.	Sex	Age	Crem Bone Wt	Grave L.	Grave W.	Grave D.	Container/Marker	Footwear	Vessels	Other ornaments	Date
1008	?	Adult	45g	?	?	0.05	Vessel	N	1		?
1014	F	Adult	195g	?	?	?	Vessel	N	3		AD 100-160
1031	M	Adult	1200g	1.37	0.76	0.25	Vessel	N	2		AD 100-160
1032	M	Adult	1300g	0.56	0.46	0.33	Vessel	N	2		2nd century AD
1033	? + ?	Adult + Child	800 + 22g	0.80	0.62	0.18	Two nails	N	1 sherd		Mid 1st–Mid 2nd AD
1034	M + M	Adult + Adult	539 + 870g	0.61	0.61	0.16	Vessel	N	1	Possible glass	?
1035	M + M	Adult + Adult	880 + 500g	0.36	0.36	0.18+	Vessel	N	1		AD 150/60-200
1036	?	Adult	95g	0.48	0.48	0.27	Two nails	N	0		?
1037	M	Adult	580g	0.31	0.31	0.15+	None	N	0	Bronze pin in fill	?
1038	M	Adult	140g	0.30	0.30	0.26+	Vessel	N	1		?
1039	M	Adult	1020g	0.30	0.30	0.18	None	N	0		?

Cremation 1035. (1470N/542E) a) Adult Male, b) Adult Male (Fig. 4.55)

NB 269.34

Grave pit: Roughly circular with vertical sides and stepped base, measuring 0.36m in diameter and 0.18 + m deep.

Pit fill: Black charcoally fill containing many pieces of bone (some large), and medium brown loam also containing pieces of bone. Cremation urn placed upright into the loamy part of the fill.

Finds in fill: Residual flint.

Grave furniture: None noted, but seven iron nails found (including one inside vessel).

Grave-goods:

1035.1 Jar in GRY fabric; rim and upper quarter of the body missing; incised lattice decoration over most of the pot, ending in a clear band at the shoulder and at the base; some burnishing on foot and shoulder (max girth 192mm; Base 88mm). Probably Marsh and Tyers IIF.B. AD 150/60–200. Contained human bone (some pieces quite large), mainly in the lower half of the vessel, and one iron nail.

Bone: Cremated bone inside and outside pot, apparently representing

two adult male individuals. Both displayed poor preservation, incomplete burning, white in colour: (a) 880g, max L. 51mm (b) 500g, max L. 58mm.

Cremation 1036. (1480N/552E) Adult (Fig. 4.55)

NB 269.37

Grave pit: Squarish with rounded corners, steep sides and rounded base, measuring $0.48 \times 0.48 \times 0.27\text{m} + \text{deep}$. Damaged by ploughing.

Pit fill: Pebbly brown fill with blotches of black charcoally soil (charcoal comprising oak and poplar) containing some bone, overlying a black charcoally fill with little charcoal but large quantities of bone.

Finds in fill: Two iron nails and flint flake.

Grave furniture: None.

Grave-goods: None.

Bone: Poor condition; complete burning; white in colour; 95g; max L. 34mm.

Cremation 1037. (1417N/499E) Adult Male (Fig. 4.55)

NB 269.39

Grave pit: Roughly circular with rounded profile, measuring 0.31m in diameter and 0.15m + deep. Damaged by ploughing. *Pit fill:* Dark brown loam with patches of black charcoally fill and many pebbles, overlying a black charcoal-rich fill with much bone and few pebbles.

Finds in fill: Bronze pin fragment. Round-sectioned, shaft fragment only (L. 7mm; Diam. 2mm).

Grave furniture: No data.

Grave-goods: No data.

Bone: Quantity of bone lying against the clean side of the pit, possibly as a lining of bone. Poor condition; complete burning; white in colour; 580g; max L. 50mm.

Cremation 1038. (1405N/505E) Adult Male (Fig. 4.55)

NB 259.41; 261.151

Grave pit: Shape unclear since set into quarry face, but steep sides and flat base, measuring $0.3 \times 0.3 \times 0.26\text{m} + \text{deep}$.

Pit fill: Light brown sandy fill with much cremated bone (quite large pieces).

Finds in fill: Iron stain, but no object recovered. Sherds of sand-tempered wheel-thrown pottery, out of their original position.

Grave furniture: No data.

Grave-goods:

1038.1 Jar in GRY fabric. The rim and upper part of the vessel is missing (Base 56mm). Long-lived form.

Bone: Many fragments throughout the fill. Poor condition; complete burning; white in colour; 140g; max L. 51mm. *Remarks:* This cremation was discovered in the quarry face during clearing for the excavation of Cremation 1039. See NB 261.76.

Cremation 1039. (1470N/503E) Adult Male (Not illus.)

NB 269.42; 261.152

Grave pit: Small and oval, with rounded profile, measuring c. 0.3m in diameter and 0.18m deep, located partly within a natural hollow.

Pit fill: Light brown/yellow sandy loam fill with much cremated bone but no charcoal or reddening of pit sides. *Grave furniture:* No data.

Grave-goods: None.

Bone: The pit was packed full of cremated bone. Incomplete burning, white in colour, 1020g, max L. 109mm.

Overview – The Cremation Burials

The 11 cremation burials ([Table 4.10](#)) fall into two distinct clusters ([Fig. 4.57](#)): a smaller cluster of just three burials – Cremations 1037, 1038 and 1039 – in the south corner of the enclosure, and a larger and more dispersed cluster in the northern corner (Cremations 1031–6), as well as two outliers (Cremations 1008 & 1014) in the central part. Seven of these 11 burials were associated with pottery; where identifiable, this dated from the late first to the late second century, and it is assumed that the unaccompanied cremation burials were contemporary.

Types of Cremation Burial

The cremation burials in Cemetery III fall into three main types: unurned, those with just a cremation urn, and those with both a cremation urn and accessory vessels ([Fig. 4.57](#)). The unurned burials, of which there are four, are Cremations 1037 and 1039 in the east corner and Cremations 1033 and 1036 in the northern corner. While unurned, two of these were accompanied: Cremation 1037 produced a bronze pin fragment, 7mm long and 2mm in diameter, possibly a grave- or pyre-good, while Cremation 1033 contained a sherd of samian, Drag 27, possibly residual, but possibly a token grave-good or fragment of pyre-good. All of these features seem to represent genuine

cremation burials rather than deposits of pyre debris: in Cremation 1033 the fairly large bones were described as a bundle, with the bone weight from the two individuals represented totalling 822g, while quantities of bone were noted in the lower fills of Cremations 1036, 1037 and 1039b (totalling 95g, 580g and 1020g, respectively). Although two of the unurned burials (Cremations 1036 & 1037) had intermixing of charcoal with the cremated remains, this seems to represent less careful selection of bone for burial, rather than the redeposition of pyre debris as such (Cremations 1033 and 1039 had no charcoal present, and here the cremated remains seem to have been carefully separated from the pyre debris that would have been associated with them). It may be that Cremation 1033 had its 'bundle' of bones wrapped in an organic container; other examples of this are known from Great Dunmow (Wickenden 1988, 19–20), where the cremated bone from one cremation burial lay in a line from east to west, and was thought to have been contained within a linen or leather bag, as well as from Stansted Airport (Havis and Brooks 2004, 250) where the deposition of bone in organic holders such as bags was suggested for Cremations 9, 12, 13 and 16.

Table 4.11. Summary of pottery vessels associated with Cemetery III (stj – storage jar; bkr – beaker; urn – contains cremation).

1014.1	Stj urn	AD 70+
1014.2	Bkr	AD 90–160
1041.3	Jar	AD 110/120–150/160
1031.1	Stj urn	AD 50/60–120
1031.2	Bkr	AD 100–160
1032.1	Stj urn?	AD 70–200+
1032.2	Jar	AD 100–200+
1033.1	Samian	AD 50–150
1034.1	Stj urn	AD 70+
1035.1	Jar urn	AD 150/160–200
1038.1	Jar urn	AD 110/120+

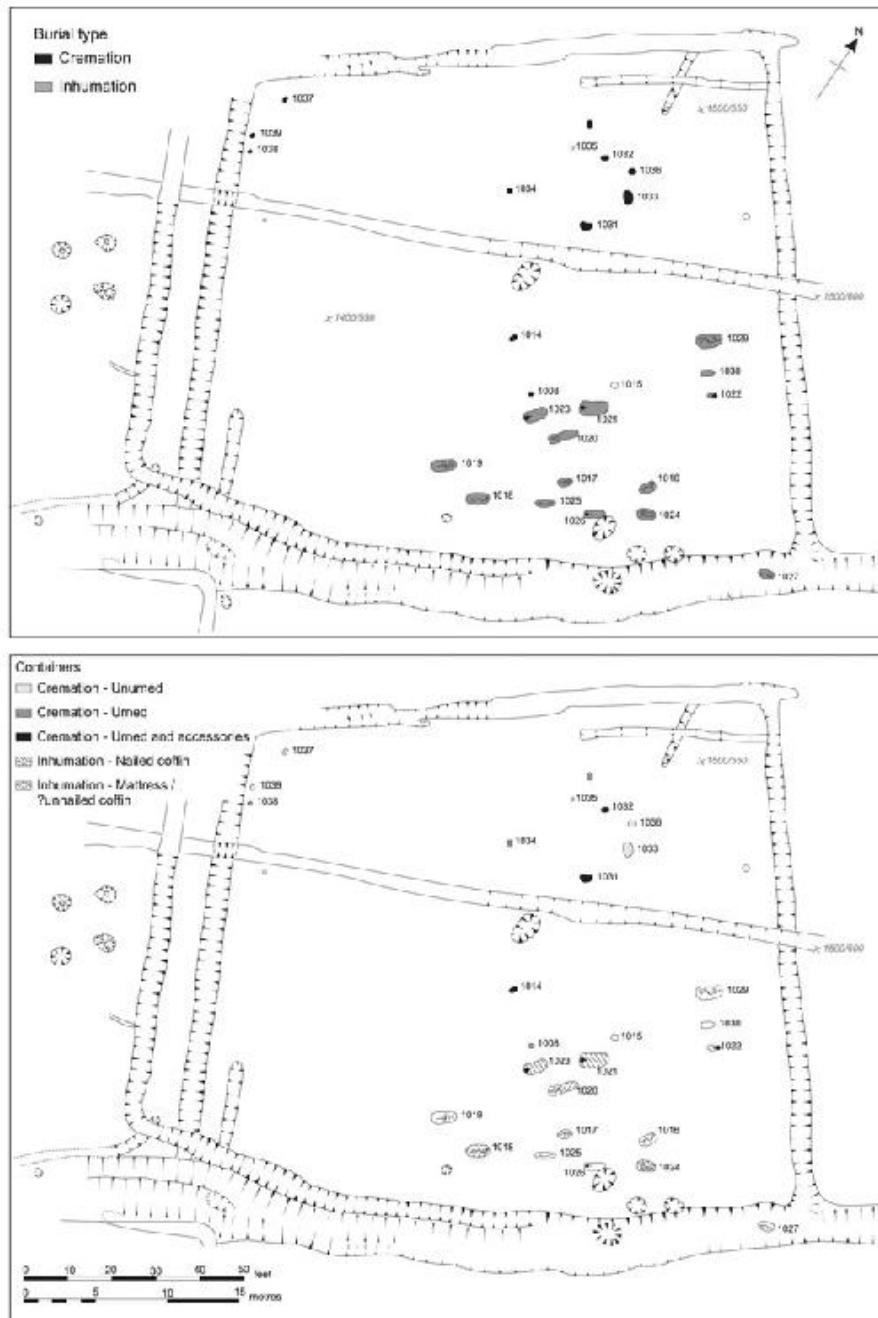


Figure 4.57. Plan of Cemetery III showing location of inhumation and cremation burials (upper); below plan showing locations of urned and unurned cremation burials, and inhumation coffin use.

Four burials are associated with just the cremation urn, while three

others also have accessory vessels. In all cases, the main cremation vessel was a large grey ware jar, in common with most other Romano-British urned cremations (Philpott 1991, 30). All the jars were upright in the pit and, in all but one case, only contained some of the cremated bone. The exception, Cremation 1032, had a pit only just large enough to take the cremation urn (whose accessory vessel lay inside). In all the other cases, though, amounts of human bone were found outside, and usually under, the associated vessels (see Cemetery I for further examples of this practice, and discussion of parallels). Where well recorded, all these deposits of cremated bone from outside the vessels were associated with charcoal-rich fills (Cremation 1038 was truncated by the quarry face, and no charcoal was recorded; charcoal was recorded from Cremation 1008 but this too was heavily truncated). We may therefore be seeing a cemetery-wide practice here of placing pyre debris into the base of the grave pit and placing the cremation urn, with selected bones inside, on top. The deposition of pyre debris in cremation burials has been recognised at some more recent excavations, for example at Strood Hall, Essex (Timby *et al.* 2007), Stansted Airport (Cooke *et al.* 2008, 136–40), Broughton (Atkins *et al.* 2014, 241) and Royston Road, Baldock (Burleigh 1993, 43–4). Overall, the weights of cremated bone included within these burials (despite the quite severe truncation suffered by several) were higher than in many of the other cemeteries, with a mean weight of 584g. Even with the three double burials (see below), this seems to represent more careful selection of bone from the funeral pyre. Thus, although this cemetery may look ‘poor’ in terms of its associated furnishings, actual investment of time and labour in the funerary rites may have been greater than in Cemetery I’s cremations, for example.

Pottery Vessels

As noted by Rosemary Jefferies, Cemetery III had a very limited range of vessels, all of which were made either at Mucking or in north Kent (Table 4.11). Like Cemetery I, truncated storage jars were used as cremation urns. However, it is unclear whether the vessels were damaged before burial or as a result of later farming activities. The cemetery’s date range spans AD 50/60–200 although most probably centres on AD 50/60–160/70.

Just three of the cremations had accessory vessels as well as their main cremation urns (see Fig. 4.58). In Cremation 1014, the two accessory vessels – a poppyhead beaker and a small jar – were both placed inside the cremation urn together with some of the cremated remains. A similar practice was seen in Cremation 1032, where again a small accessory vessel – a Verulamium Ware jar – was placed inside the jar used as the main cremation vessel. In Cremation 1031, the

accessory vessel, a London Ware poppyhead beaker, was placed upright alongside the cremation urn, and on top of some of the cremated remains.

Other Possible Grave- or Pyre-goods

As mentioned above, two of the unurned burials contained possible grave- or pyre-goods: a samian sherd in Cremation 1033, and a bronze pin fragment in Cremation 1037. Other than these, the only other possibly associated material consisted of iron nails or nail shanks in pit fills or among the cremation deposits: two shanks lying flat in the fill of Cremation 1031, two iron nails at the surface of the bone concentration in Cremation 1033, three iron nails in the pit fill of Cremation 1034, seven iron nails found in Cremation 1035 (including one inside the cremation urn itself) and two iron nails in the fill of Cremation 1036. These five burials form a tight cluster in the northwestern corner of the cemetery, and it is possible that the nails or shanks represent either the placing of the cremation deposit inside a wooden box (perhaps unlikely, given the lack of structure and the paucity of nail numbers reported), or the remains of bier-type structures, redeposited alongside the cremated remains into the grave fills and cremation urns.

Possible Cremation Pit Burning

Two of the burial pits presented fairly convincing evidence for having been burnt. In Cremation 1031, the gravel around the edges of the pit and along the base had been reddened through burning; the fill of this pit was also described as dark and charcoally (and charcoal of ash, oak and sloe were all identified). This was also a large grave pit, 1.37 × 0.76m wide and 0.25m deep. Could this have been a *bustum* burial, where the cremation takes place *in situ*, and the remains fall into the stokehole/draught chamber under the pyre? The cremated bone was located underneath both vessels (in small fragments), with further small fragments deposited inside the main cremation urn. It is possible that this pit was the actual location of the cremation ritual, with the bone collected and placed inside Other the urn after cooling. Struck (1993) has demonstrated that *busta* are rare in Britain; they are distributed over the whole province, but are more frequent in the north, especially at Hadrian's Wall. The earliest examples are from the second half of the first century AD (which is when this grave may date to). Their apparent connection with military sites and larger settlements, and the lack of Iron Age examples, suggests that the rite is intrusive from the Continent. If Cremation 1031 was a *bustum* burial,

it would have been a *Grubenbustum*, where the cremation takes place above a pit into which the remains fall. The bone weight from this cremation, at 1200g, is high for this site. An alternative explanation would be that the remains of the pyre had been redeposited into this burial pit while still hot, causing the burning seen, and accounting for the presence of charcoal.

Table 4.12. Summary of burial attributes for Cemetery III inhumations.

Grave No.	Sex	Age	Grave L.	Grave W.	Grave D.	Orient	Container/ Marker	Coffin L.	Coffin W.	Coffin D.	Head to	Position	Footwear	Vessels	Other ornaments	Date
1016	?	?	1.52	0.71	0.48	NNI-SSW	None	-	-	-	NNE	RHS Flexed	N	0	Flint scraper	
1017	?	?	1.68	0.76	0.76	NNI-SSW	Mattress/bier?	-	-	-	NNE	RHS crouched	N	0	Flint scraper	
1018	?	?	1.68	0.61	0.76	SSW-NNE	?Unnailed coffin	?	?	?	SSW	RHS Flexed	N	0	Wooden artefact?	
1019	?	?	1.52	0.86	0.46	NNI-SSW	None	-	-	-	NNE	Supine Ext	N	0		
1020	?	?	2.08	0.66	0.54	SSW-NNE	?Unnailed coffin	?	?	?	SSW	Supine Ext	N	0	Pillow?	
1021	?	?	1.83	1.04	0.70	SSW-NNE	Nailed coffin	1.52	0.52	0.36	SSW	RHS Flexed	N	0		
1022	?	Child	1.07	0.61	0.30	SSW-NNE	None	-	-	-	NNE	LHS Flexed	N	0		
1023	?	?	1.83	0.91	0.39	NNI-SSW	Nailed coffin	1.32	0.61	0.30	SSW	Supine Ext	N	0		
1024	?	?	2.07	0.91	0.31	SW-NE	Nailed coffin	1.73	0.48	0.27	SW	Supine Ext	N	0		
1025	?	?	1.52	0.61	0.38	SW-NE	None	-	-	-	SW	Supine flexed left	N	0		
1026	?	?	1.83	0.61	0.46	SSW-NNE	Two nails	-	-	-	SW	RHS Flexed	N	0		
1027	?	?	1.14	0.5	0.20	SSW-NNE	None	-	-	-	SW	RHS Flexed	N	0		RB
1029	?	?	1.68	1.14	0.53	NNI-SSW	None	-	-	-	NNE	RHS Flexed	N	0		
1030	?	Child	1.06	0.58	0.36	SSW-NNE	None	-	-	-	?	?	N	0		

Cremation 1033 presents a less-convincing case. Although the pit was described by the excavator as having reddened edges, and burnt gravel in the base, the cremated remains here were a ‘bundle of fairly large bones placed at one end of the pit’; it is possible that we see here a case of the redeposition of (still hot?) pyre debris, with the cremated remains carefully placed on top, possibly on or in a container, as there was a clearly defined stain or line between the bottom of the cremated bones and the top of the gravel.

Multiple Cremations

Three cremation burials had more than one individual represented. Cremations 1034 and 1035 both contained two adult males, while Cremation 1033 held an unsexed adult and a young child (*Infans I*). The latter was unurned, while the other two were urned but unaccompanied. It may be significant that these multiple cremations were part of the coherent group in the northwestern corner of the cemetery, and that they were true cremation burials, rather than redepositions of pyre debris.

Age and Sex Patterning

A high proportion of the cremated remains were identified osteologically as adult males: five single adult males, two double adult male burials, as against just a single adult female and three unsexed adults (of which one was interred with a young child). While the numbers of cremation burials here are small (and bearing in mind the possible unreliability of the osteological sexing), there does seem to be some clustering of male burials (with all three in the southwest cluster identified as such, and the southernmost four of the northwestern cluster). There does not, however, appear to be a link with grave furnishing: the most elaborate burial (albeit with only two accessory vessels) was identified as female, as against the other two burials with accessory vessels, which were male. There does not appear to be any correlation with grave size either: adult male burials are seen in both the largest grave (Cremation 1031) and in the three smallest (Cremations 1037, 1038 & 1039; it may be significant that these smallest grave pits form a tight cluster in the southwest of the cemetery, and are relatively unelaborated, with just one having an associated cremation urn or any other form of grave-good). It may also be significant, in terms of sex-related treatment, that all the identified male graves were in circular or oval graves; the two graves that were irregularly rectangular or square in plan (Cremations 1033 & 1036) contained unsexed adults, plus a young child in the former (the grave of the one identified adult female, in Cremation 1014, had been too badly truncated to determine its shape).

Cemetery Status

The cremations in Cemetery III have a mean value of 1.0 vessels per cremation; this lies at the very bottom end of the scale for cemeteries in the southeast of England (Philpott 1991, 33), and may reflect the relative status of this group of cremations (though see comments on amounts of human bone collected above). How this compares to the other cremation cemeteries at Mucking will be explored further below. This low figure may relate to the relatively early date of the cemetery. Similarly, the high proportion of unurned cremations (36%, or four of the 11 cremation burials) may indicate a relatively low social status for the cemetery as a whole (cf. Philpott 1991, 45, though note that his figures for the Mucking cemeteries are incorrect in this respect). The location of the cemetery may also be reflected in this apparently low status, lying as it does away from the central zone of settlement (as does Cemetery I, which displays similarly low numbers of vessels).

Overview – Inhumation Burials

As well as the reasonably well-dated cremations

discussed above, Cemetery III had 14 inhumation burials, all located in the northeastern quadrant of the cemetery and spatially distinct from the cremations (Table 4.12; see Fig. 4.57). These were all unfurnished (with the exception of two that may have had organic grave-goods and which are discussed below); three had evidence for nailed coffins, and a further three for possibly unnailed coffins, while one was undoubtedly Roman due to its stratigraphic position within a Roman ditch sequence. While several of these 14 burials were initially assigned possible prehistoric status by the excavators due to their flexed or crouched position in the grave, all the inhumations are here treated as contemporary.

Coffin-use

Half the burials had evidence for coffins or related features (see Fig. 4.57). There were three graves with nailed coffins: Grave 1021 contained an oak coffin ($1.52 \times 0.52\text{m}$ and 0.36m deep) with 11 associated nails; the wood from the coffin in Grave 1023 was unidentified, but it employed 26 nails and measured $1.52 \times 0.61\text{m}$ and 0.30m deep; this was also true for the coffin in Grave 1024, that was $1.73 \times 0.48\text{m}$ and 0.27m deep, with 22 associated nails. Graves 1018 and 1020 had partial coffin stains, but no nails, indicating that unnailed coffins may have been employed. Finally, the two nails from Grave 1026 may indicate coffin-use, but as no stain was noted, this must remain uncertain. Was there anything distinctive about the coffined burials? The main aspect to note is that all were orientated to SW or SSW: of the five burials with heads to the NNE, none had evidence for a coffin, though Grave 1017 had a rectangular black layer over the whole floor of the grave pit, perhaps evidence that the body had been placed on a 'mattress' or wooden bier.

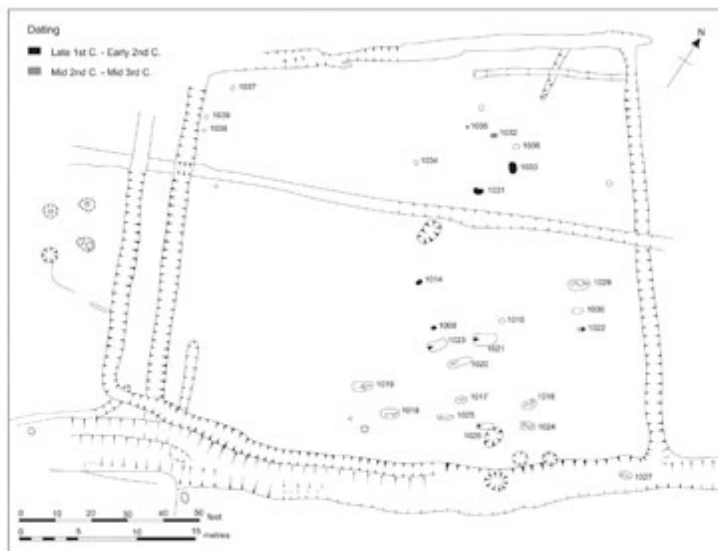


Figure 4.59. Plan showing dated cremations.

The use of coffins was also associated with the larger graves: the nailed coffin graves were all 1.83m or longer. No grave shorter than 1.68m was associated with any coffins, biers or the like. While we might have expected an association between coffin-use and supine extended burial, this does not appear to be strong: while three of the four supine extended burials had evidence for nailed or unnailed coffins, the flexed burial in Grave 1021 was interred in a nailed coffin, and that in Grave 1018 probably in an unnailed coffin.

Below, Quita Mould comments concerning the evidence of the coffin construction:

Iron was recovered from four burials in Romano-British Cemetery III (Graves 1021, 1023, 1024 & 1026). A coffin stain was present in three of the burials (Graves 1021, 1023 & 1024) and the burials had clearly been in nailed coffins. The shanks from two broken nails were recovered from Grave 1026 but no coffin stain was seen. Eleven small nails were found in Grave 1021; seven had minerally preserved wood remains but no joints were present. Twenty-six small nails, complete examples between 37–60mm long, were found in Grave 1023. Minerally preserved wood occurred on 21, the single joint present indicating a timber 42mm thick. Many of the 22 nails found in Grave 1024 appear to have been displaced into the centre of the coffin; no heavy nailing at the corners was evident. Only two nails were complete, one being 50mm and the other 61mm long.

Fifteen examples had minerally preserved wood remains and provided evidence suggesting that the side boards had been at least 31mm thick. Two wood joints were preserved but were not measurable.

Body Positioning and Grave Orientation

The 14 inhumations saw a variety of body positioning [Fig. 4.58](#): four were supine and extended, in the usual Romano-British manner; one was supine, but with the legs flexed to the left; six were flexed on the right side, and one was crouched, while one was flexed on the left side (no skeletal positioning could be identified in Grave 1030). These body positions showed no correlation with orientation, or with the provision of coffins (see above): both flexed and extended burials were found with heads to NE and to SW. Nor did there seem to be any link with age (sex and age could not be skeletally-determined for any of the burials, but grave size and body stains could be used in some cases to give an approximation of age). The only graves thought to be for children were Grave 1022 (at 1.07m long, this was one of the shortest graves in the cemetery) and, by extension, Grave 1030 (although this was not definitely a grave). It was originally thought that Graves 1016 and 1017, both of which were flexed or crouched on the right hand side, and both of which produced a flint scraper from the grave fill, could be of prehistoric date. However, several other burials in the cemetery have either the same orientation or the same body position, and there seems no strong reason to retain the distinction.

All of the inhumations lay on a broadly NNE–SSW alignment, but there was variation as to the orientation of the body. Five had the head to NNE, four to SSW and four to SW (again, the orientation of probable Grave 1030 could not be established). There was no obvious spatial clustering of orientation groups.

Possible Grave-goods

Flint scrapers were found in Graves 1016 and 1017. There is some evidence that flint artefacts were occasionally deposited in Romano-British graves: Grave C at Ford, Reculver, contained a Neolithic scraper (Whiting 1924, 24–5), Cremation 33 at London Road, Canterbury a flint flake, and Cremation 44 at the same cemetery a Bronze Age flint arrowhead (Frere *et al.* 1987, 276). At Gatcombe, an early third-century cremation, perhaps of a child, contained a flint arrowhead and four ‘pyramidal stones’ (Branigan 1977), while the later second-century Cremation 4 at Langford Road, Heybridge (Langton and Holbrook 1997) had a Neolithic flint blade that had

been deliberately deposited in a pit with the other grave-goods. In the case here, the two graves in question both occurred in the area of a Grooved Ware-attributed occupation cluster. With its flint assemblage having a high scraper frequency, this is the most likely source of the flintwork in the graves (i.e. residual; see Fig. 1.6 and Prehistory Vol., chap. 2).

The only other possible grave-goods associated with the inhumation burials in Cemetery III were two possible organic artefacts, and perhaps a pillow. A linear stain under the body in Grave 1018 may suggest a decayed wooden artefact. Another linear stain was seen above the body in Grave 1020: this was reported to be 1' 6" long (approximately 0.46m), and thought to be bone. In the vicinity of the head in the same grave was a dark silty area, measuring 0.36m by 0.23m and 0.15m thick. This was interpreted by the excavator as possibly comprising decayed turves, and it was suggested that they may have served as a pillow; it is also possible that other organic materials were used.

Various views have been put forward for the dating of the inhumations in Cemetery III [Fig. 4.59](#). A few were seen from the start as probably prehistoric (Graves 1016 & 1017 in particular), but as outlined above, the burial positions, and even the possible prehistoric flint gravegoods, all see parallels in dated Romano-British graves, both here at Mucking and elsewhere. Considerable confusion was caused by the large pit, which cut through both Grave 1016 and the confined burial Grave 1024. Reported as producing large numbers of flint-gritted sherds, this feature (1441N/621E) was originally interpreted as prehistoric, probably Middle Iron Age. It cannot be, however, due to its truncation of Grave 1024 (clearly Romano-British with its nailed coffin), and this removes some of the argument for Grave 1016 being prehistoric. It seems most likely that the (large, flat-bottomed) pit is Anglo-Saxon (perhaps the 'flint-gritted' pottery reported was in fact granitic-tempered, as seen at other contemporary sites), and that both graves are contemporary with the use of the cemetery as a whole. It is, however, uncertain what that date is. The lack of any datable grave-goods means that the burials can only be dated by type, or by stratigraphy. In terms of the latter, the best evidence comes from Grave 1027, which was located in the bottom of the Central Enclosure outer extension; it was apparently quite late in the ditch fill, and so of secure Romano-British date. There were no intercutting graves (suggesting perhaps that the graves were marked in some way), and only one grave (aside from Grave 1027) cut another feature: Grave 1019 cut the shallow – and undated – pit 1410N/591E. Slightly more support for a Romano-British dating for the graves comes from the residual finds in the grave fills: alongside the flints and flint-gritted

sherds found, several wheelmade sherds were also residual: an orange-red sherd in Grave 1019, Romano-British 'pottery scraps' in Grave 1022, a rim and another possible Romano-British sherd in Grave 1026, and 'wheel-thrown sherds' in Grave 1029; these graves are dispersed right across the cemetery. While intrusion might be suggested for a single instance, the weight of evidence here suggests that these graves belong in the Roman period, and are presumably contemporary with the cremation burials.

The burial rites seen in the inhumations would support a mid Roman dating. The use of coffined and uncoffined burials but the absence of any nailed footwear, as evidenced by hobnails, would argue for an earlier date in the sequence of Roman inhumation burial in Britain. Overall, Cemetery III presents a picture of a poorly furnished collection of graves, both inhumations and cremations, but it has been argued that they are best viewed as contemporary and dating to the later first and second centuries, making them contemporary with other cremations in Cemeteries I, II and IV.

Cemetery IV

This was the last cemetery to be located and excavated [Fig. 4.60](#); it was discovered in 1978, on the quarry margins preceding the area's reinstatement. It therefore lay somewhat to the east of the others, and slightly further down the terrace. Like Cemeteries I–III, its date-span is comparatively wide, for it contained cremation burials of the later first to early third centuries, plus a solitary stone coffin burial of the later fourth century (Grave 1086).

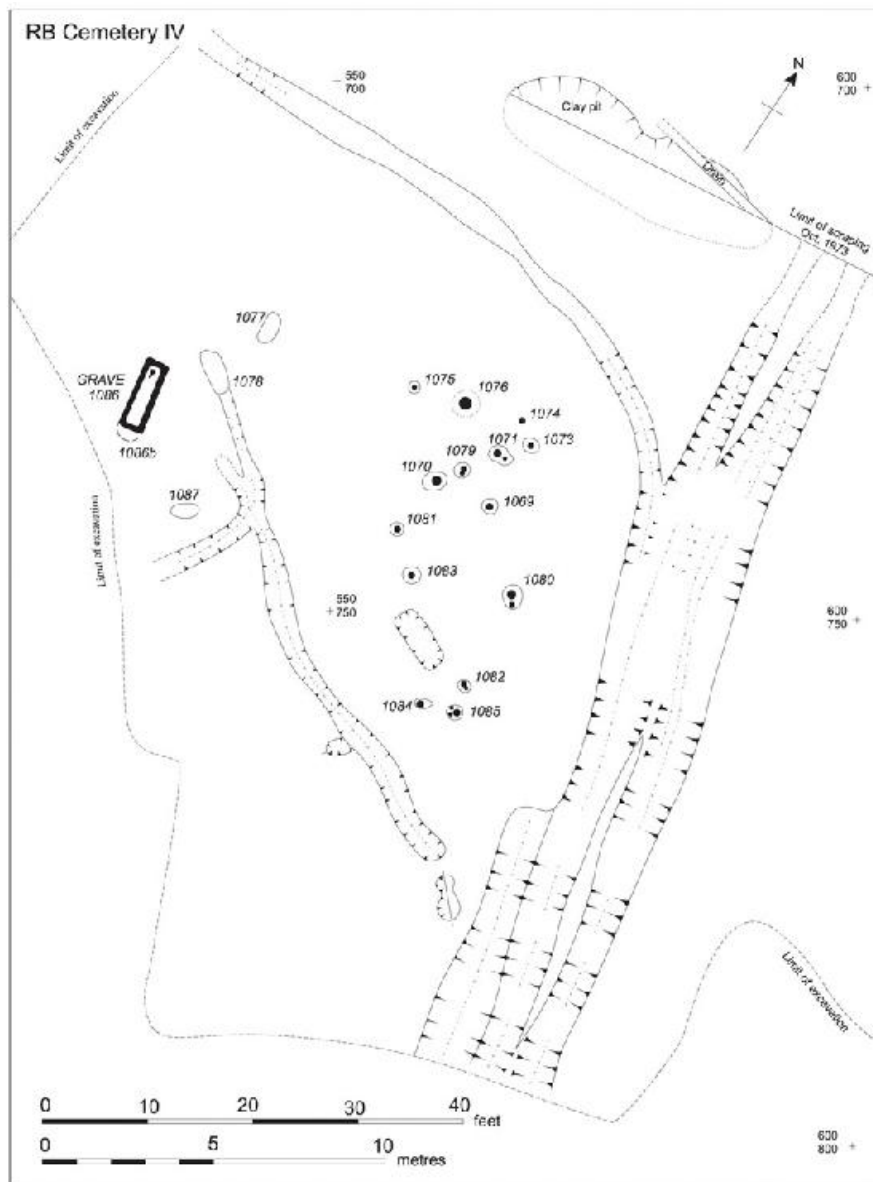


Figure 4.60. Plan of Cemetery IV.

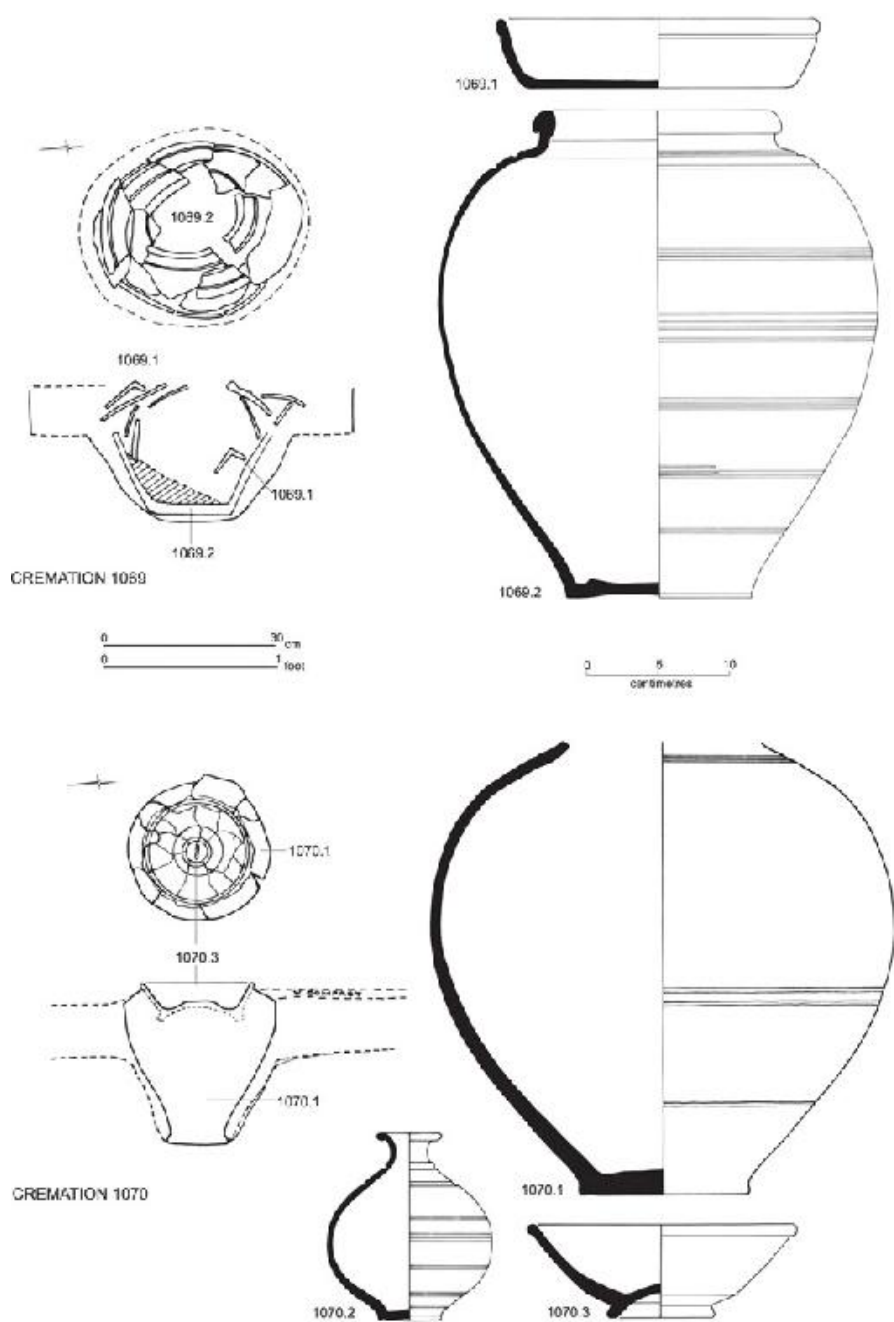


Figure 4.61. Plans, sections and grave-goods from Cremations 1069 and 1070.

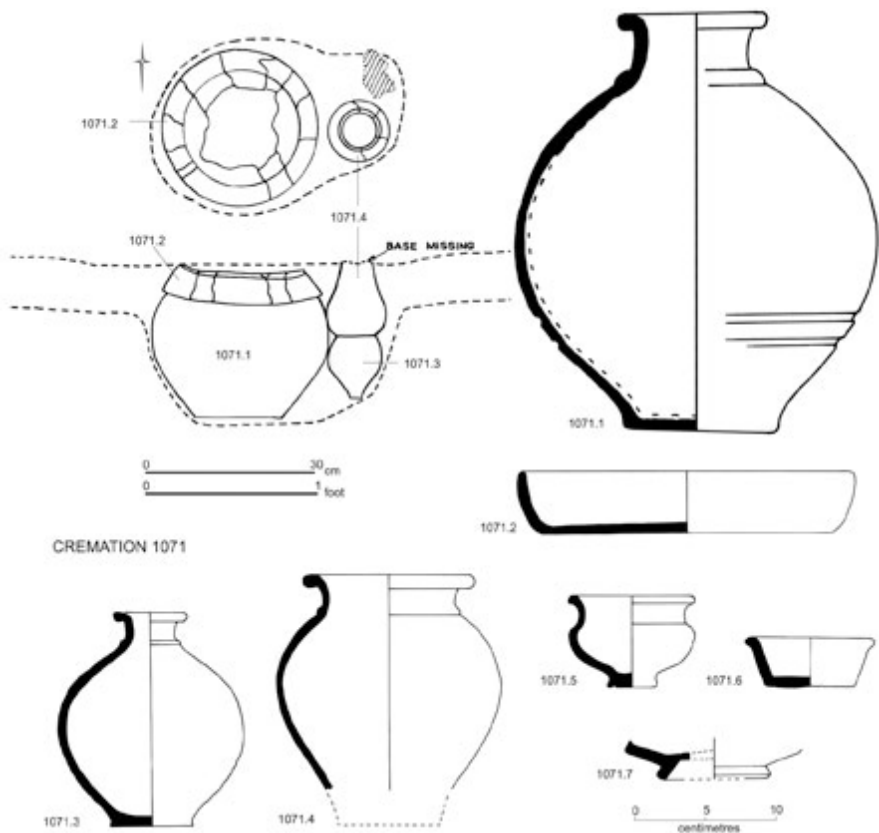


Figure 4.62. Plan, section and grave-goods from Cremation 1071.

The cremations were discovered after trial excavations in the threatened area (Catton 1978). A smallscale excavation was mounted along a 15m-wide strip of farmland adjacent to the remaining areas of gravel along the quarry margins, which were likely to be disturbed during land reclamation. Machine stripping was carried out using a tracked hydraulic excavator, with a toothless ditching bucket, across 27,000sqm. A lower level of stripping was maintained as deep subsoil with a mixed gravel/brickearth geology meant that soilmark identification was difficult; a lack of volunteers also meant that handwork had to be kept to a minimum.

The stone coffin burial, Grave 1086, was discovered late in 1978 after all the site excavations had finished, during the reinstatement itself, while the old quarry track (not investigated in the 1978 excavations proper) was being regraded where it ran over brickearth (Jones 1979, 26). Unfortunately, the dragline operator, a recent recruit with no archaeological experience, thought he had hit a block of concrete and the coffin suffered blows with the dragline bucket, only reporting the find when he spotted human bones. A 'pit' associated with the coffin burial containing pottery has now been interpreted as a further cremation burial (Cremation 1086b). This cemetery, therefore, contained a total of 18 cremation burials (these all probably dating from the later first to early third century AD), plus the much later stone coffin burial.

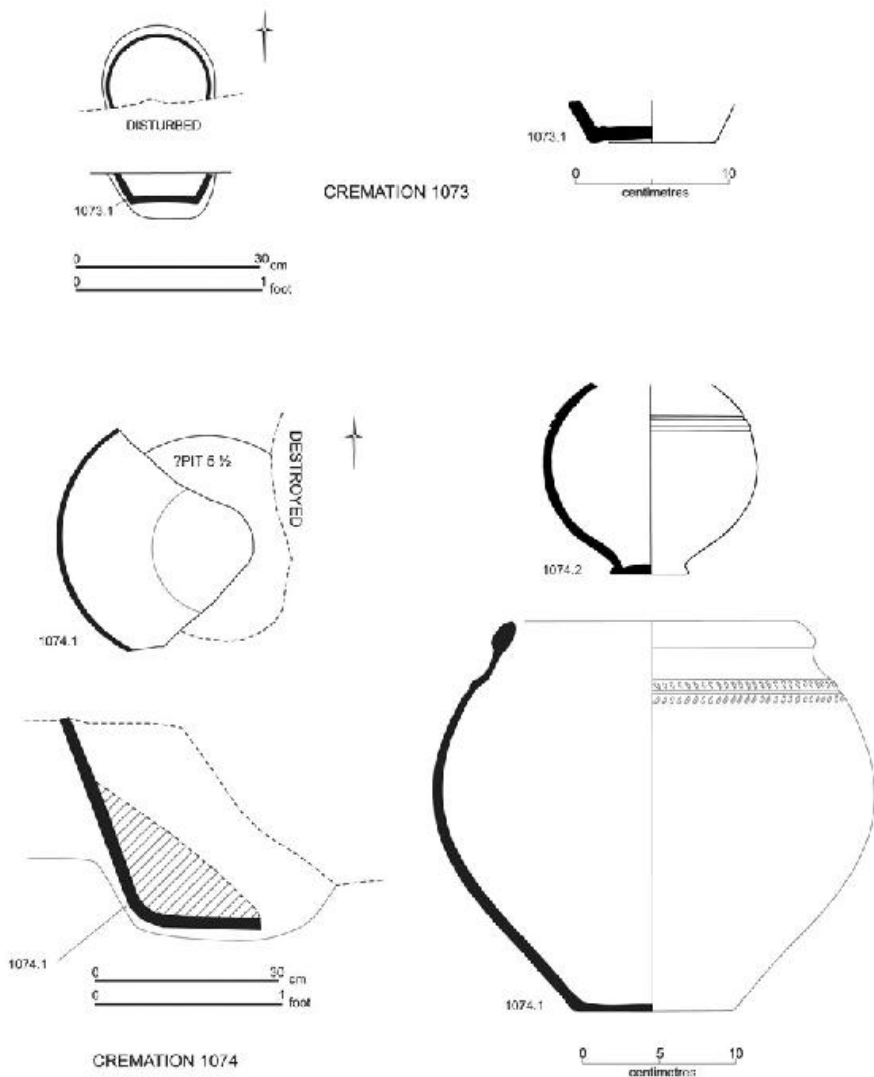


Figure 4.63. Plans, sections and grave-goods from Cremations 1073 and 1074.

Grave Catalogue

Cremation 1069. (564N/740E) Adult (Fig. 4.61)

NB 150.162, 361.39

Grave pit: Unclear, roughly circular. 0.33m diameter and c. 0.48m deep.

Pit fill: Light brown clayey loam with medium pebbles. **Grave-goods:**

1069.1 Dish in BBT2 fabric, burnished outside and inside, groove below rim (Rim 230mm; Ht 46mm; Base 194mm; EVE 0.8). Mucking product (RB04). AD 110/20–250/300. Placed upside down over 1069.2.

1069.2 Storage jar in GVC fabric; narrow-necked with six bands; undercut rim; cordon at base of neck; groove below larger cordon; bands of burnishing (Ht 337mm; Rim 182mm; Base 137mm; EVE 0.8); Mucking product (?JB04). AD 40/50–250. Occurs in north Kent. Filled most of the pit and was used as the cremation urn.

Bone: Found inside 1069.2. Poor preservation; complete burning; white in colour; 7g; max L. 4mm.

Cremation 1070. (559N/739E) Adult (Fig. 4.61)

NB 150.163, 361.38

Grave pit: No real pit, the cremation was within a pot (1070.1) buried in a hole just big enough to take it. 0.30m diameter and c. 0.28m deep.

Pit fill: Medium brown loam with medium pebbles.

Grave-goods:

1070.1 Large storage jar in GVC fabric with cordons on the shoulder and a small base, complete except for missing rim (lost in antiquity). Graffito on shoulder and burnished zone around max girth (Ht 298mm; Base 120mm). Mucking product. AD 50/60–170/80.

1070.2 Small flask in GRY fabric. Horizontal rough and burnished banded decoration; groove on shoulder, zone of white slip, burnished inside (Ht 133mm; Rim 45mm; Base 43mm; EVE 0.21). Mucking product (KA01; a long-lived form associated with both cremations and inhumations; see vessel 1.1 in Cemetery I). AD 110/20–200/10. Found inside 1070.1.

1070.3 Complete Drag 31 Ludowici SA (Rim 180mm). Placed right way up in the mouth of 1070.1, acting as a lid. Stamped by Minutus of Trier. Minutus 3a 31/Sa (2 examples) ¹MINVTVS·F¹ Trier^a. This stamp appears on forms 31R and 32 etc and has been noted from Niederbieber. Late second- or early third-century.

Bone: Poor preservation; complete burning; white in colour; 780g; max L. 37mm.

Remarks: Found after scraping.

Cremation 1071. (565N/736E) Adult (Fig. 4.62)

NB 150.164, 361.38

Grave pit: Unclear in the brickearth natural, but appears oval, with steep sides and flat base, measuring 0.48 × 0.30 × c. 0.33m deep. Excavated rapidly in advance of quarrying operations.

Pit fill: Light brown clayey loam with medium pebbles. Tightly placed inside the pit was the main cremation urn (1071.1) with another vessel (1071.2) used as a lid. Next to it, and touching, was another cremation urn (1071.3), again with an inverted vessel (1071.4) as a

lid. Vessels 1071.5–6 were placed inside 1071.1, with the samian fragment 1071.7 found next to its base (possibly residual).

Grave-goods:

1071.1 Large storage jar in GVC fabric. Very coarse – a second? Areas of spalling around rim. Two grooves below neck (Ht 295mm; Rim 260mm; Base 120mm; EVE 0.8). Mucking product (?FA01). AD 120/30–250. Main cremation urn, with dense cremated bone concentration in base.

1071.2 Dish in BBT2 fabric. Three lines or grooves decorating it inside (Ht 45mm; Rim 235mm; EVE 1.0). Mucking product (RB04). AD 110/20–250/300. Used as a lid for 1071.1

1071.3 Narrow-necked jar in GRY fabric. Single cordon at the neck, and four burnished bands (Ht 152mm; Rim 55mm; Base 57mm; EVE 0.21). A second. Mucking product (KA01). AD 110/20–200/10.

1071.4 Undercut rim jar in GRY fabric with no base (removed by ploughing/stripping). Groove at neck (Ht c. 150mm; Rim 124mm; EVE 0.8). Mucking product (?FA01). A second. Used upside down as lid for 1071.3. AD 120/30–250.

1071.5 Miniature shallow bowl in GRY fabric. Burnished on neck, small distorted pedestal (Ht 63mm; Rim 90mm; Base 37mm; EVE 0.8). A second. Mucking product (?OE01). AD 110/20–160/70. Found inside 1071.1.

1071.6 Miniature dish in GVC fabric; handmade (Ht 35mm; Rim 90mm; Base 65mm; EVE 1.0). A second. AD 90–150+. Found inside 1071.1.

1071.7 Part of foot-ring of samian vessel found next to the base of 1071.1.

Bone: Poor preservation; incomplete burning; white in colour; 1320g; max L. 24mm. Cremated bone found in bottom of 1071.1; two small metal fragments found with this cremation deposit may have been the remains of pyre-goods. Also a patch of cremated bone found outside of the pots.

Cremation 1073. (567N/735E) Child (Infans II) (Fig. 4.63)

NB 150.166, 361.37

Grave pit: Disturbed on one side, but roughly circular and just large enough to take the pot; c. 0.13m diameter and 0.07m deep.

Pit fill: Light brown clayey loam with few medium pebbles. *Grave-goods:*

1073.1 Grey ware vessel base and body sherds (shoulder), with a ridge inside the base (no form or date can be assigned). Base 83mm. Used as cinerary urn.

Bone: Cremated bones found inside 1073.1. Poor preservation; complete burning; white; 17g; max L. 11mm.

Remarks: The sections suggest that the top of the cremation urn was lost through ploughing or scraping.

Cremation 1074. (566N/735E) Adult (Fig. 4.63)

NB 150.167, 361.37

Grave pit: Shape unclear due to truncation by a lorry track and other disturbance, but appeared to be just large enough to contain cremation urn 1074.1, with steep sides and flat base; c. 0.30m diameter and c. 0.19m deep.

Pit fill: Light brown loam. Other sherds recovered may indicate accessory vessels, or residual material.

Grave-goods:

1074.1 Storage jar in GRY fabric. Shoulder cordon decorated with incised? herringbone pattern (Ht 250mm; Rim 210mm; Base 102mm; EVE 0.2). Mucking product (JB02). AD 70–250+.

1074.2 Globular jar in GFN fabric. Narrow-necked with double-grooved decoration below shoulder; rim missing (Ht 125mm+; Base 54mm). Probably a Mucking product. AD 110/20+.

Bone: Cremated bone from base of 1074.1. Poor preservation; complete burning; white in colour; 220g; max L. 31mm.

Cremation 1075. (557N/730E) Adult (Fig. 4.64)

NB 150.168, 361.37

Grave pit: No pit visible. Very little data preserved. Just the cinerary urn found (c. 0.19m diameter and c. 0.13m deep). *Pit fill:* No data available.

Grave-goods:

1075.1 Base (upper part ploughed off), of a large storage jar in GVC2 fabric with coarsely ringed and fettled surfaces, used as a cinerary urn (Ht 340mm+; Base 116mm). Mucking product. A second (no date can be assigned).

Bone: Poor preservation; complete burning; white in colour; 270g; max L. 13mm.

Cremation 1076. (562N/730E) Adult Male (Fig. 4.64)

NB 150.169, 361.36

Grave pit: Same size as large jar (i.e. cinerary urn), 0.46m diameter and c. 0.16m deep.

Pit fill: Medium brown pebbly clay loam.

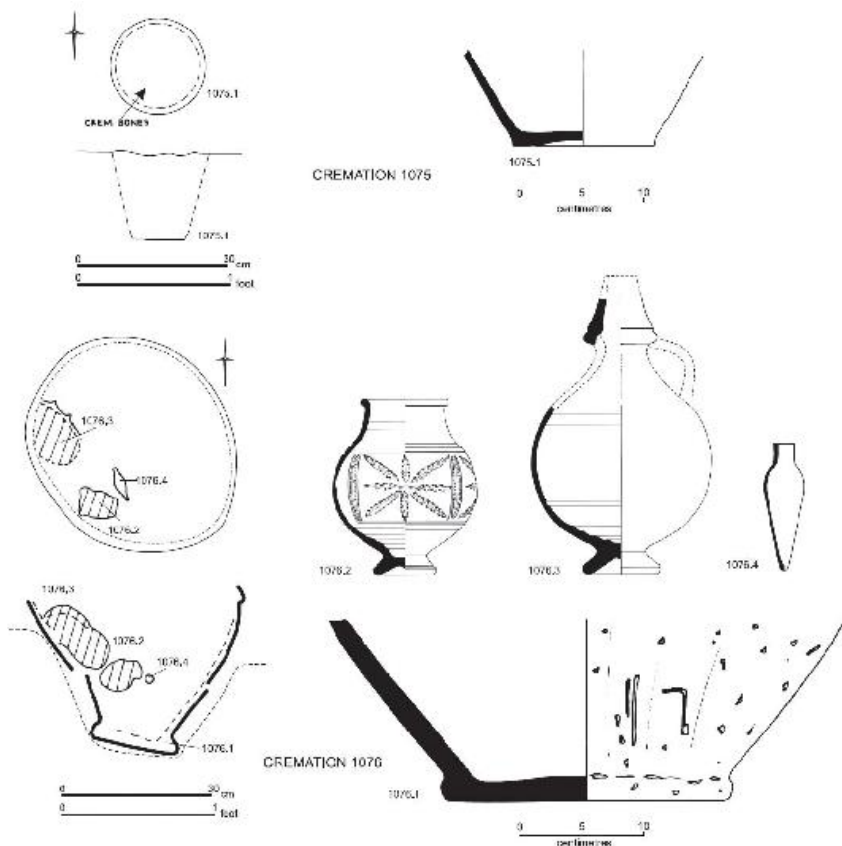


Figure 4.64. Plans, sections and grave-goods from Cremations 1075 and 1076.

Grave-goods:

1076.1 Base of a large storage jar in GVC2 fabric, with the upper part ploughed off (Ht 500mm; Base 232mm). Mucking product (no date can be assigned). A second. This vessel used as a cinerary urn.

1076.2 Beaker, Ludowici class VS (Diam. 7.5cm), as Oswald and Pryce 1920, pl. 77.5. Rheinzabern. Decorated with incised motifs: eight-armed stars formed of narrow palmleaves, alternating with narrow vertical palm-leaves, each repeated four times round the vessel. First half third century; almost complete but worn and distorted. Found with vessel 1076.3 inside cinerary urn.

1076.3 Rim, body and base sherds, undecorated flagon (rim diameter 3.5cm); probably all one vessel. For the form cf. Oswald and Pryce 1920, pl. 83, 11, but the neck on the

Mucking flagon carries three pairs of grooves. The form, with its characteristic conical neck, seems only to have been made at Trier and to date from around the middle of the third century; the version with

three grooves on the neck is Type 17b in the 'Massenfund' potters' dump at Trier (Bird 1993, 10–11 and fig. 4; Huld-Zetsche 1971, Abb. 7). The rim sherd came from '538 × 741 area near stone coffin'. Found with 1076.2 inside the cinerary urn (1076.1).

1076.4 At least 138 fragments from colourless unguent bottle, rim missing, narrow neck, cylindrical body tapering in to base. Present Ht 102mm. Probably a third-century unguent bottle, of a type that normally has indented sides. Similar to example from Colchester (Price and Cottam 1998, fig. 80a). *Bone*: Poor preservation; complete burning; white in colour; 920g; max L. 32mm.

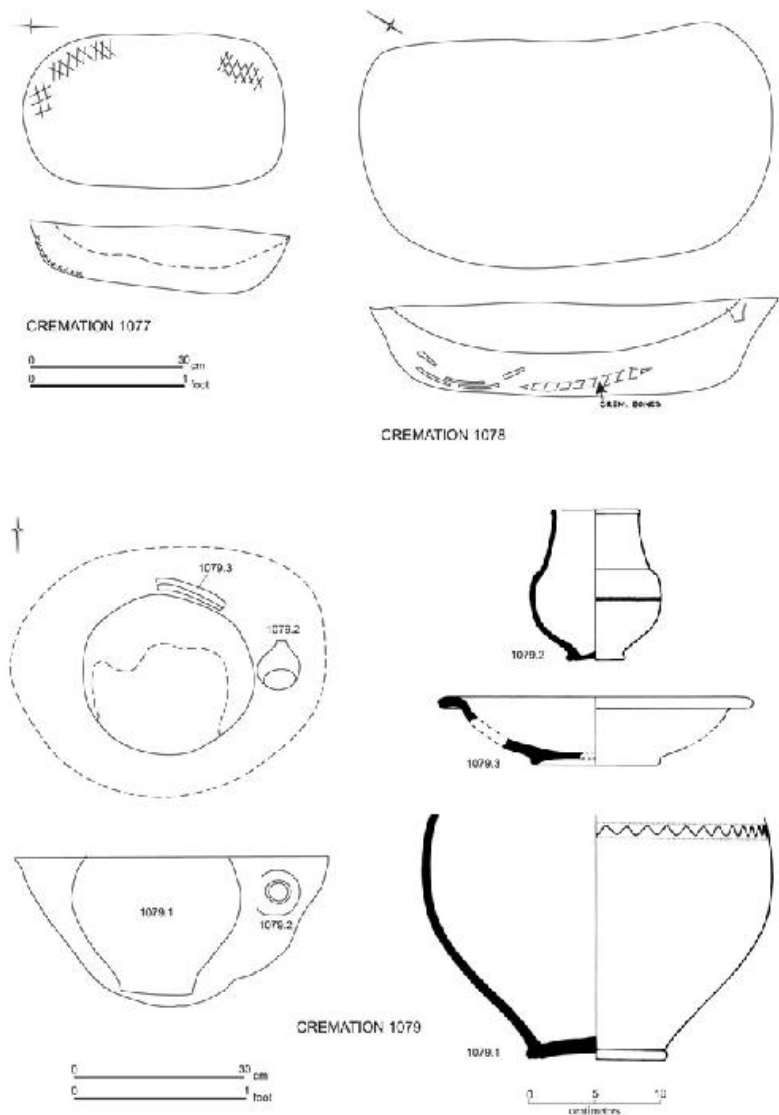
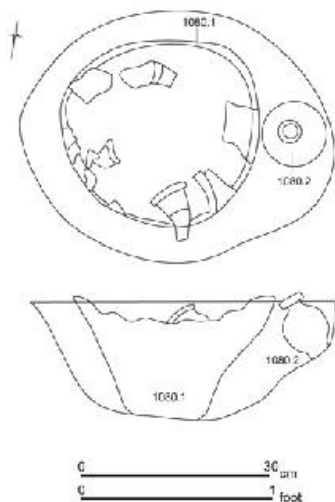
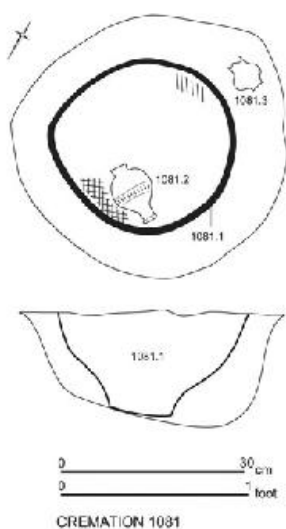
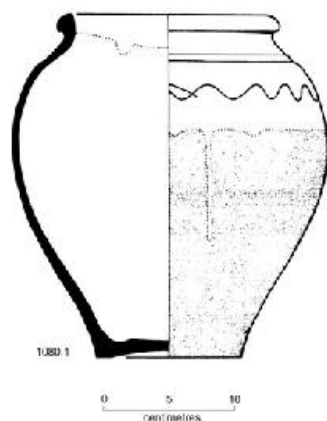


Figure 4.65. Plans, sections and grave-goods from Cremations 1077, 1078 and 1079.



CREMATION 1080



CREMATION 1081

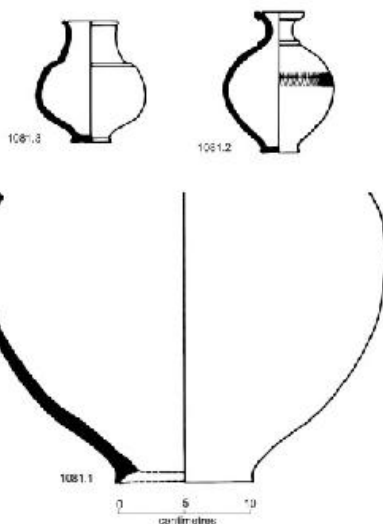


Figure 4.66. Plan, section and grave-goods from Cremations 1080 and 1081.

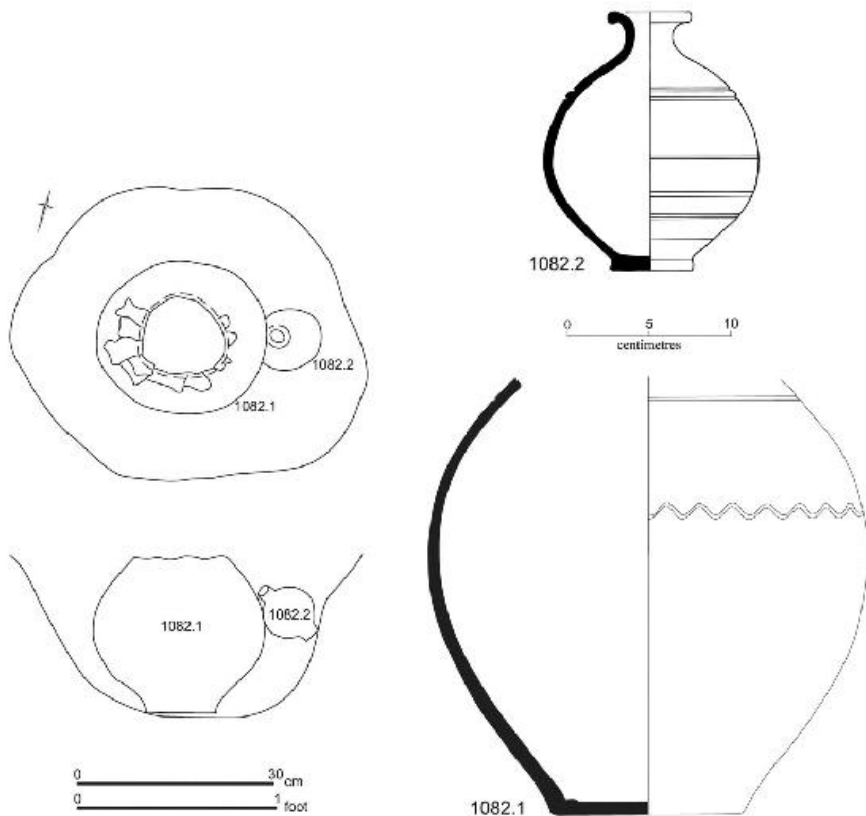


Figure 4.67. Plan, section and grave-goods from Cremation 1082.

Cremation 1077. (544N/724E) Adult (Fig. 4.65)

NB 150.170, 361.36

Grave pit: Oval, $0.48 \times 0.31 \times c. 0.15\text{m}$ deep.

Pit fill: Lower fill (B): Charcoally loam with fragments of burnt bone. Upper fill (A): Light brown medium loam with pebbles. There are signs of scorching on the edge of the grave pit.

Grave-goods: None.

Bone: Poor preservation; complete burning; white in colour; 3g, max L. 5mm.

Remarks: Was the cremation put in the pit whilst still hot or is this a cremating pit? Very similar to Cremation 1078.

Cremation 1078. (538N/729E) Adult (Fig. 4.65)

NB 150.171, 361.35

Grave pit: Oval, $0.76 \times 0.45 \times c. 0.19\text{m}$ deep. The edges scorched red.

Pit fill: Lower fill (B) Charcoal, and cremated bones. Upper fill (A) Redeposited brickearth with medium pebbles.

Finds in fill: Unspecified sherds of pottery.

Grave-goods:

1078.1 [Not illus] Storage jar in ?GVC fabric. Mucking product. A second. Not cinerary urn, but within the feature, which was extremely disturbed. The base is missing and the vessel was damaged by fire, probably post-manufacture.

Bone: Poor preservation; complete burning; white in colour; 132g; max L. 28mm.

Remarks: Most of the bottom of this pit was burnt red, suggesting that this was the location of the cremation. Some of the pottery is also burnt.

Cremation 1079. (562N/730E) Adult (Fig. 4.65)

NB 150.172, 361.33–4

Grave pit: Oval, with steep sides and rounded base, measuring $0.47 \times 0.43 \times c. 0.23\text{m}$ deep.

Pit fill: Light brown clayey fill. Main cremation vessel (1079.1) placed upright in centre of pit with another vessel (largely lost; 1079.3) perhaps used as a lid or possibly just residual, with accessory vessel (1079.2) placed horizontally high up in pit fill outside.

Grave-goods:

1079.1 Narrow-necked jar in GRY fabric, with stabbed decoration on the shoulder; rim is missing (Ht 188mm+; Max girth 270mm; Base 108mm). Mucking product. AD 110/20–250+. Used as cinerary urn.

1079.2 Narrow-necked beaker in GFN fabric (Ht 116mm; Base 26mm; Rim 69mm; EVE 1.0). Mucking product (NP01). AD 200–300+.

1079.3 Rim of a shallow dish perhaps used to cover the mouth of 1079.1 (Rim 241mm). Possibly residual.

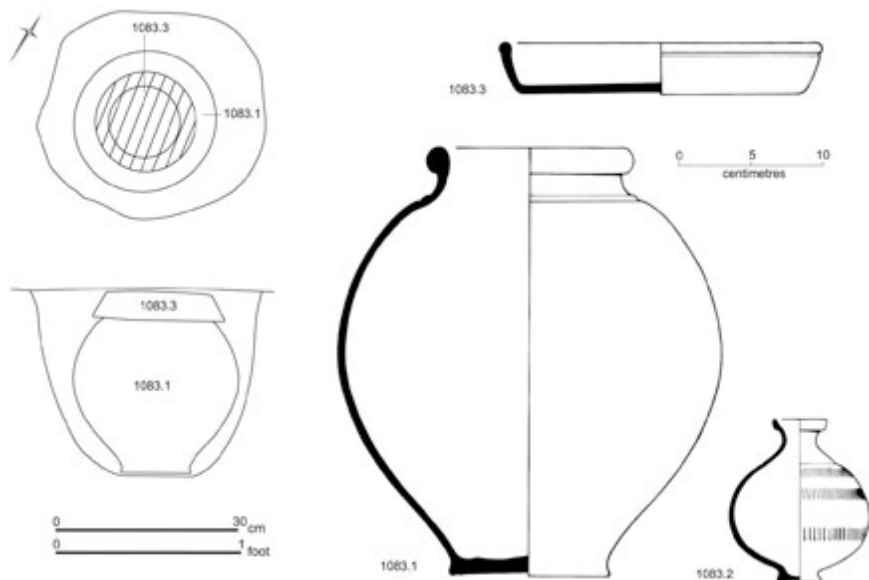


Figure 4.68. Plan, section and grave-goods from Cremation 1083.

Bone: Cremated bones within the cinerary urn. Poor preservation; complete burning; white in colour; 770g; max L. 39mm.

Cremation 1080. (566N/750E) a) Adult Female, b) Adult Female (Figs. 4.66 & 4.73)

NB 150.173, 361.33

Grave pit: Irregular oval, $0.46 \times 0.35 \times c. 0.16$ m deep.

Pit fill: Medium brown loam, with some pebbles.

Grave-goods:

1080.1 High-shouldered jar in GRY fabric with a rolled rim and a shoulder groove (Ht 262mm; Base 112mm; Rim 172mm; EVE 0.74). Upper part ploughed off (rim in vessel interior). Mucking product (JB05). AD 70–200/250+. Used as the cremation urn.

1080.2 [Not illus] Narrow-necked, globular bodied flask. No further details (stolen from excavation and not illustrated). **Bone:** Both sets of remains have poor preservation, complete burning and are white in colour: (a) 780g; max L. 82mm; (b) 1100g; max L. 62mm.

Cremation 1081. (554N/744E) Adult Male (Figs. 4.66 & 4.73) NB 150.174

Grave pit: Irregular, sub-rounded, with steep sides and sloping floor. $0.46 \times 0.41 \times c. 0.17$ m deep.

Pit fill: Medium brown sub-soil with some pebbles. Main cremation urn (1081.1) placed centrally in pit, with one accessory vessel inside (1081.2) and one outside in the pit fill (1081.3).

Grave-goods:

1081.1 Base of a large storage jar in GVC fabric (upper part ploughed off), used as a cinerary urn (Ht 220mm+; max girth 314mm; Base 106mm). Mucking product. AD 70–200+. 1081.2 Small, narrow-necked jar in GRY fabric (Ht 111mm; Base 34mm; Rim 42mm; EVE 0.86). Mucking product (KA01). AD 110/20–200/10.

1081.3 Globular long-necked beaker in ?GFN fabric (Ht 94mm; Base 31mm; Rim 42mm). Mucking product (NP01). AD 200–300+.

Bone: Poor preservation; complete burning; white in colour; 1350g, max L. 83mm. One lower premolar identified, in fairly good condition, suggests young adult.

Cremation 1082. (560N/758E) Adult Male (Fig. 4.67)

NB 150.175

Grave pit: Irregular, sub-rounded shape, with steep sides and flat base, measuring 0.55 × 0.46 × c. 0.24m deep.

Pit fill: Medium brown clayey loam. Cremation urn (1082.1) placed slightly off-centre in pit, with accessory vessel 1082.2 resting higher up in the pit fill against the side of the pit and the outside of the cremation urn.

Grave-goods:

1082.1 Large oval-bodied jar in GRY2 fabric (top ploughed off), used as a cinerary urn. Undecorated save for wavyline burnish on mid-wall exterior (Ht 268mm+; max girth 268mm; Base 118mm; EVE 1.0). Mucking product. AD 110/20–250+.

1082.2 Small, globular narrow-necked jar in GRY fabric, with sets of deep grooving on the body; worn, with traces of slip around neck (Ht 56mm; Base 52mm; Rim 52mm; EVE 0.6). Mucking/Thames Estuary product (KA01). AD 110/20–200/10.

Bone: Poor preservation; complete burning; white in colour; 980g; max L. 72mm.

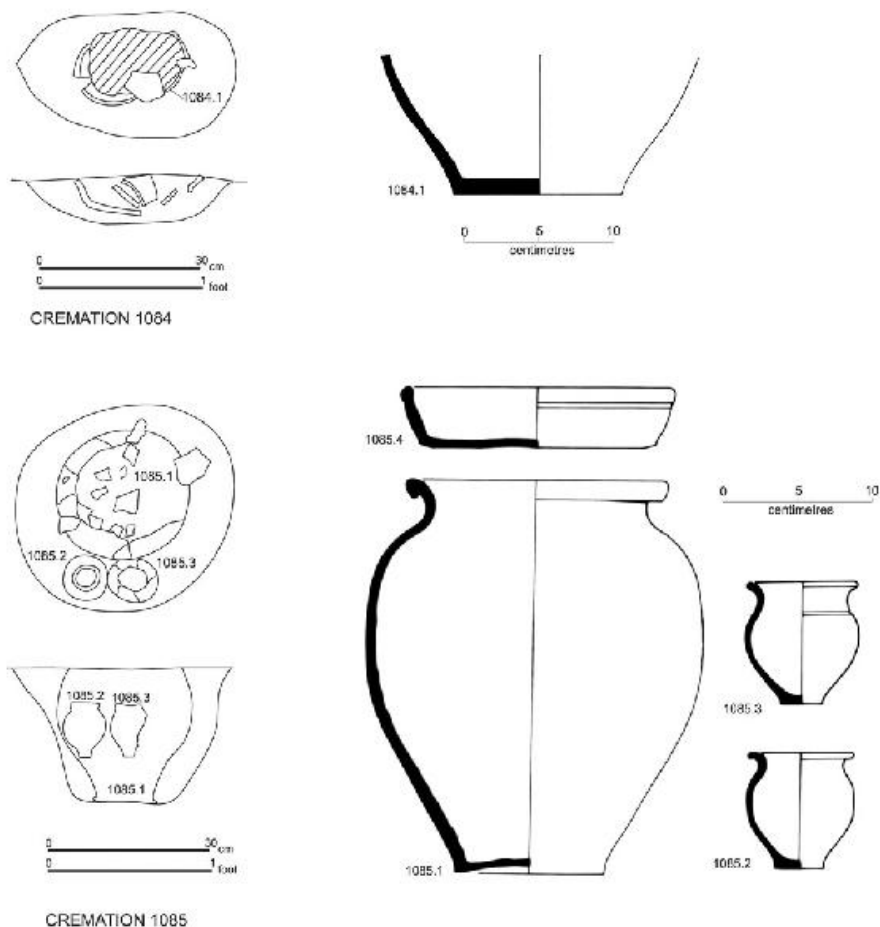


Figure 4.69. Plans, sections and grave-goods from Cremations 1084 and 1085.

Cremation 1083. (556N/749E) a) Adult Male, b) Adult Female (Fig. 4.68)

NB 150.176

Grave pit: Sub-rounded, with near-vertical sides and flat base, measuring $0.38 \times 0.31 \times c. 0.32\text{m}$ deep.

Pit fill: Medium brown clayey loam. Cremation urn 1083.1 placed centrally in pit, with platter 1083.3 used inverted as a lid, and accessory vessel 1083.2 placed inside, halfway down in fill.

Grave-goods:

1083.1 Large globular storage jar used as cinerary urn in GRYS fabric. Rolled rim; small cordon at base of neck; top of shoulder well worn; incised ring on base; possible second (Ht 290mm; Base 112mm; Rim 140mm; EVE 0.76). Well worn. Mucking product (FA01). AD 120/30–250.

1083.2 Narrow-necked beaker in GRY fabric with three bands of vertical incised line decoration imitating rouletting; well worn cord on shoulder; uneven base may suggest a second (Ht 112mm; Base 30mm; Rim 38mm; EVE 0.54); Mucking product (KA01). AD 110/20–200/10. Found inside 1083.1.

1083.3 Dish in GRY fabric found upside down over mouth of 1083.1; Mucking product (RB04). Decorated on the inside with ?incised concentric circles; groove below rim; well worn (Ht 34mm; Base 200mm; Rim 226mm; EVE 1.0). AD 100/10–250/300.

Bone: Both sets of remains have poor preservation, complete burning and are white in colour. (a) 1300g, max L. 70mm; (b) 870g, max L. 46mm.

Cremation 1084. (555N/761E) Adult (Fig. 4.69)

NB 150.177

Grave pit: Roughly oval, with sloping sides and rounded base; heavily truncated, measuring $0.39 \times 0.21 \times c. 0.09$ m deep.

Pit fill: Light brown loam with a central patch of dark charcoally loam and cremated bone.



Figure 4.71. Photographs of Grave 1086.

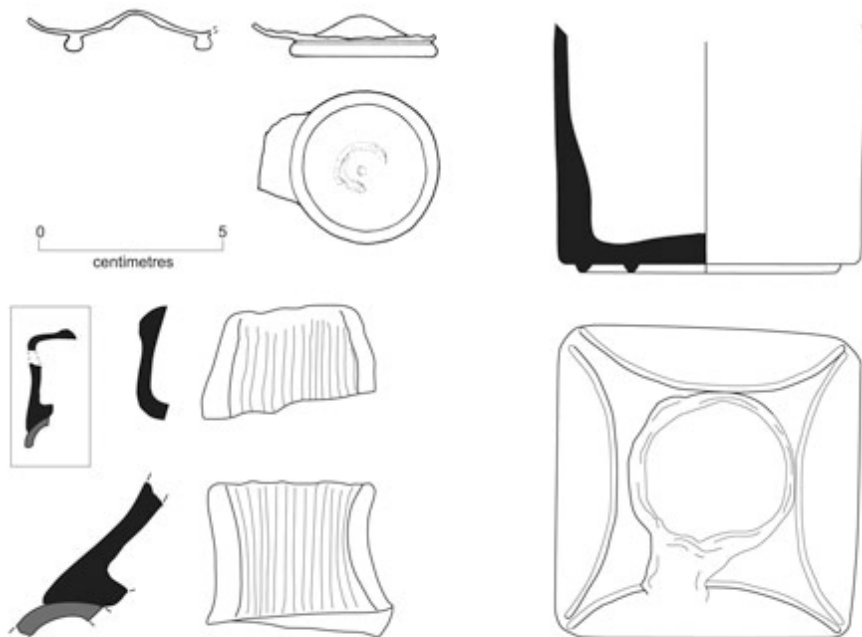


Figure 4.72. Glass vessels from Cremation 1087.

Grave-goods:

1084.1 Fragments of a storage jar (Base 114mm); Mucking product. No date can be assigned.

Bone: Poor preservation; complete burning; white in colour; 95g; max L. 36mm.

Cremation 1085. (558N/760E) a) Adult Male, b) Adult Female (Fig. 4.69)

NB 150.178

Grave pit: Roughly circular, with steep sides and flat base, measuring $0.39 \times 0.34 \times c. 0.26$ m deep.

Pit fill: Grey brown loam with few pebbles. Main cremation urn placed upright on base of pit, with two identical miniature accessory vessels placed in fill between it and the pit cut, and a possible fourth vessel used as a lid.

Finds in fill: Sherds of a grey ware platter.

Grave-goods:

1085.1 Large storage jar with hooked rim in GFN fabric, used as cinerary urn (Ht 270+mm; Base 102mm; Rim 178mm; EVE 0.96). Mucking product (FA06). AD 100/10–250/300. 1085.2 Small wide-mouthed jar in GRY fabric (Ht 78mm; Base 34mm; Rim 72mm; EVE 0.98). Mucking product (FA01). AD 120/30–250. Placed upright in pit

fill next to 1085.1.

1085.3 Small wide-mouthed jar in GRY fabric with groove around shoulder (Ht 82mm; Base 30mm; Rim 78mm; EVE 1.0). Mucking product (FA01). AD 120/30–250. Placed upright in pit fill next to 1085.1.

1085.4. Fragments of dish in GRY fabric, found in fill of 1085.1, which probably represents a vessel used as a lid, but disturbed (Ht 40mm; Base 162mm; Rim 186mm). Mucking product (RB04). AD 110/20–250/300.

Bone: Both sets of remains have poor preservation, complete burning and are white in colour. (a) 780g, max L. 58mm; (b) 690g, max L. 57mm.

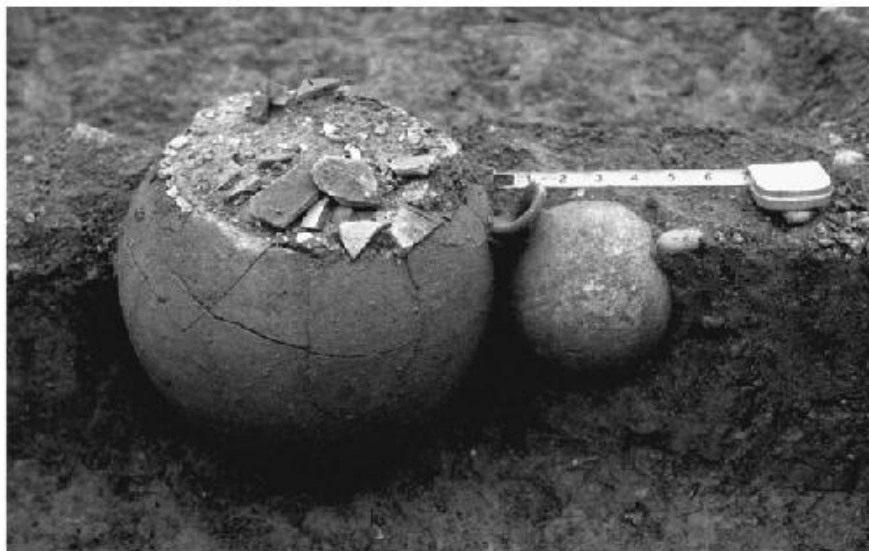
Grave 1086. (532N/730E) Adult Male c. 25–35 years Fig. 4.71 NB 103.1–5, 11–13, 15, 26, 30

Grave pit: No data available, since discovered by the dragline operator and not immediately recognised as archaeological; the grave was aligned approximately NW–SE. The grave had been dug through about a metre of brickearth; the coffin rested partly on top of a stratum of stiff gravel, which may have caused it to tilt slightly. Although the pit was seen to extend beyond the south end of the coffin by 0.3m, and was presumed to represent the pit for this grave, it was actually the pit for an earlier cremation grave (described below as Cremation 1086b).

Pit fill: The inhumation (for the human bone report, see below) was placed on a layer of ‘dirty plaster’ (gypsum; NB 103.4–5 sketch), and was then covered with a further layer of gypsum (called ‘clean plaster’; *ibid.*), above which was a thin layer of brick earth which had entered, but had not entirely filled, the coffin at some subsequent date.

Grave furniture: The coffin was in two parts, a lid and base. These were well cut both externally and internally, and the surfaces were very smooth where they survived in their original state (dragline damage consisted of the breakage and removal of the coffin lid and the breakage of the north end of the coffin). The east side of the coffin had broken in antiquity. The bottom of the coffin (inside and outside) was left rough and is of uneven thickness, 0.05–0.09m thick. The dimensions of the lid were $2.06 \times 0.68 \times 0.18$ m, and the main body of the coffin $2.03 \times 0.66 \times 0.43$ m deep. Its total weight was calculated as just under one ton. A fragment of the coffin was taken by L. Biek of the Ancient Monuments Laboratory and analysed (AML No. 785442). It is ‘a Jurassic oolitic limestone, probably Lincolnshire Limestone, but could be one of the Jurassic limestones from Normandy’ (F.W. Anderson *in litt.*, August 29th, 1980). A further

report by M. Wilkinson identifies the specimen more precisely to Lincolnshire. Visible on three sides of the interior of the coffin were stains suggesting that an inner lining of wood existed ($1.83 \times 0.53\text{m}$). This was nailed at the corners, at least some of the nails surviving *in situ*. Together with the stain, these show the wood to have been 0.05m thick. There is no data on the analysis of the wood fragments, but in line with the data from the coffined burials from Romano-British Cemetery I (see above), it is assumed that the wood was oak or, less likely, poplar. Tom Jones argued that this was a bier, rather than an inner coffin, as the toe bones of the skeleton overlapped the wood stain and the nails, which all lay in the wood stain itself.



CREMATION 1080



CREMATION 1081

Figure 4.73. Photographs of Cremations 1080 and 1081.

Table 4.13. Summary of burial attributes for Cemetery IV cremations.

Cremation No.	Sex	Age	Crem Bone Wt	Grave L	Grave W	Grave D	Container/ Marker	Footwear	Vessels	Other ornaments	Date
1069	?	Adult	7g	0.33	0.33	0.48	Vessel	N	2		AD 110/120-250
1070	?	Adult	780g	0.30	0.30	0.28	Vessel	N	3		AD 140-170/180
1071	?	Adult	1320g	0.48	0.30	0.33	Vessel	N	6		AD 110/120-160/70
1073	?	Infans II	17g	0.13	0.13	0.07	Vessel	N	1		AD 110/120+
1074	?	Adult	220g	0.30	0.30	0.19	Vessel	N	2 or 3		AD 110/120+
1075	?	Adult	270g	0.19	0.19	0.13	Vessel	N	1		?
1076	M	Adult	920g	0.46	0.46	0.16	Vessel	N	3	Glass unguent bottle	Mid 3rd AD
1077	?	Adult	3g	0.48	0.31	0.15	None	N	0		?
1078	?	Adult	132g	0.76	0.45	0.19	None	N	1		?
1079	?	Adult	770g	0.47	0.43	0.23	Vessel	N	3		AD 200+
1080	F + F	Adult x 2	780 + 1100g	0.46	0.35	0.16	Vessel	N	2		AD 70-200/250+
1081	M	Adult	1350g	0.46	0.41	0.17	Vessel	N	3		AD 200+
1082	M	Adult	980g	0.55	0.46	0.24	Vessel	N	2		AD 110/120-200/210
1083	M + F	Adult x 2	1300 + 870g	0.38	0.31	0.32	Vessel	N	3		AD 110/120-200+
1084	?	Adult	95g	0.39	0.21	0.09	?Vessel	N	1		?
1085	M + F	Adult x 2	780 + 690g	0.39	0.34	0.26	Vessel	N	4		AD 110/120-250+
1086b	?	?	?	?	?	?	Vessel	N	2	Animal bones	AD 200-250+
1087	?	?	?	?	?	?	Vessel	N	1	Glass bottle and cup	2nd AD

Grave-goods:

1086a.1 Lower body and base, conical beaker. Green colourless, bubbly glass. Straight side, concave base with pontil mark. Base Diam. 45mm. Fragments packed in the gypsum near the left foot. The pontil mark indicates that the rim edge was fire rounded. Conical beakers with fire rounded rims are found in Romano-British sites in the middle and later fourth century and there is little doubt that this piece belongs to this period (see Price and Cottam 1998, 129–31, fig. 54a for similar examples, including three in the Burgh Castle hoard).

Human bone (from notes made by C. Crooks): The human bone was well preserved, due to the calcareous conditions afforded by the gypsum and the coffin itself. Almost all of the bones were present, although only the leg bones below the knee survived *in situ* following the discovery of the burial. These, however, indicated a supine, extended burial with head to the north. The skull was complete, with male characteristics and closed sutures. All teeth had erupted, and three third molars were present. Age, estimated from tooth wear, was 25–35 years. All epiphyses were fused, and the muscle and tendon attachments were fairly pronounced. There were no observed bone diseases or arthritis, and the pelvis had a narrow sciatic notch, again suggesting a male. The estimated stature from the femur was 176.9cm and from the tibia 165.4cm.

Cremation 1086b (532N/730E) (Fig. 4.70)

NB 103.1–5, 11–13, 15, 26, 30

Grave pit: Disturbed by the later stone coffin burial. Plans suggest a round shape and steep sides to the pit.

Pit fill: No data.

Grave-goods:

1086b.1 Small beaker in GFN fabric (Ht 80mm; Base 26mm; Rim

44mm; EVE 0.96). Pieces of this vessel were recovered from along the west side of the coffin, at its SW corner (i.e. the coffin foot), and from underneath it. Mucking product (NP01). AD 200–300+.

1086b.2 Large jar in GRY fabric with reed rim (Ht 280mm; Base 116mm; Rim 182mm; EVE 0.85). Rim distorted – a second; burnt. Decorated with burnished curvilinear designs; white slip cordons on shoulder. Scratched on the exterior wall of the vessel was a graffito, IIIVX. Details of this were submitted to Mr M. W. Hassall, who reported (*in litt.*, November 4th 1978) that it was probably a ‘numeral, presumably an indication of weight or capacity written retrograde’. Pot 1086b.2 had been disturbed by the later insertion of the stone coffin and lay on its side. Mucking product (?GC04). AD 120/30–250+.

1086b.3 [Not illus] Samian vessel?

Animal bone: Found in the fill of the grave pit with the pot were some non-human bones. These clustered around the foot-end of the burial, and it was thought possible that they could have been from inside pot 1086b.3. They consisted of fragments of piglet skull and mandible, and fragmentary bones from all parts of a goose skeleton, perhaps indicating that the whole bird had been interred.

Human bone: No data, save for ‘human bone’ being written on the pottery notes.

Cremation 1087. (536N/742E) (Fig. 4.72)

NB 103.17, 19, 150.180

Grave pit: No pit found – the cremation remains were found in the earth moved by the dragline, but it must have been situated in the RB IV cemetery area.

Pit fill: No data.

Grave-goods:

1087.1 [Not illus] Lower part of a storage jar used as a cinerary urn; burnishing below rim. Mucking product. 1087.2 Twenty-four fragments from shoulder, handle, body and base of square bottle in green glass (Base 83mm square). Basal design: hollow-sided square formed by four arcs inside base edge, enclosing circle (defect in mould has spread glass over much of circle). The bottle shows very little wear, and was probably quite new when buried; it probably dated to the end of the first or, more probably, the second century (*cf.* Price and Cottam 1998, 195–8 for square bottles, but no good parallel known for the base design). 1087.3 Nine fragments from the rim, body and base of a convex cup or small bowl. Bluish green. Everted fire rounded rim, slightly convex upper body, change of angle to convex lower body, small tubular base ring, concave base with pontil mark (Base Diam. 40mm). Probably second-century in date (*cf.* Price and

Cottam 1998, 106–8, fig. 41a for a vessel from a late Roman burial at Colchester, but a very similar unpublished bowl was found in a later second-century levelling deposit at Tanner Row in the York colonia).

Bone: No data.

Overview – The Cremation Burials

Various different types of cremation burial were present in Cemetery IV: urned cremations with no other associated vessels, urned cremations with varying numbers of accessory vessels, and unurned cremations both with and without accessory vessels (Table 4.13). Of the 15 definite urned cremations, three consisted of just the cremation urn, while 12 had one or more accessory vessels (including glass vessels).

Pottery Vessels (Rosemary Jefferies)

Cemetery IV has a similar range of vessels to those in Cemeteries I and III, with a probable date range of AD 100–200+. There are a total of 39 pots. Cremations 1070, 1074, 1076, 1079, 1081 and 1083 had three vessels in each burial (Fig. 4.74). Cremation 1085 had four pots, while Cremation 1071 had six. Only Cremations 1073, 1075, 1078, 1084 and 1087 had a single pottery vessel each; all were truncated storage jars. Cremations 1076 and 1081 also had truncated storage jars, which had been used as cremation urns. Those in Cremations 1071, 1075, 1076, 1078, 1083 and 1086b were seconds of Mucking kiln products. That in Cremation 1078 had been damaged by fire, probably postmanufacture. Narrow-necked jars occurred as accessory vessels in Cremations 1071, 1074, 1079 (used as the cremation urn), 1080, 1081, 1082 and 1083; these were all also Mucking products.

Cremation 1071 had six vessels of which four were seconds (Vessels 1017.3–6). A comparison with other cemeteries, both rural and urban, shows that seconds were used in both cremations and burials. Possibly there was a trade in such vessels for this purpose. Although there was a wider range of pots in Cemetery IV, there seems to have been a larger number of seconds present. With the exception of the samian vessels 1070.3, 1071.7 and 1076.2–3 (and the glass vessel in 1087) all the pottery seems to have been local products.

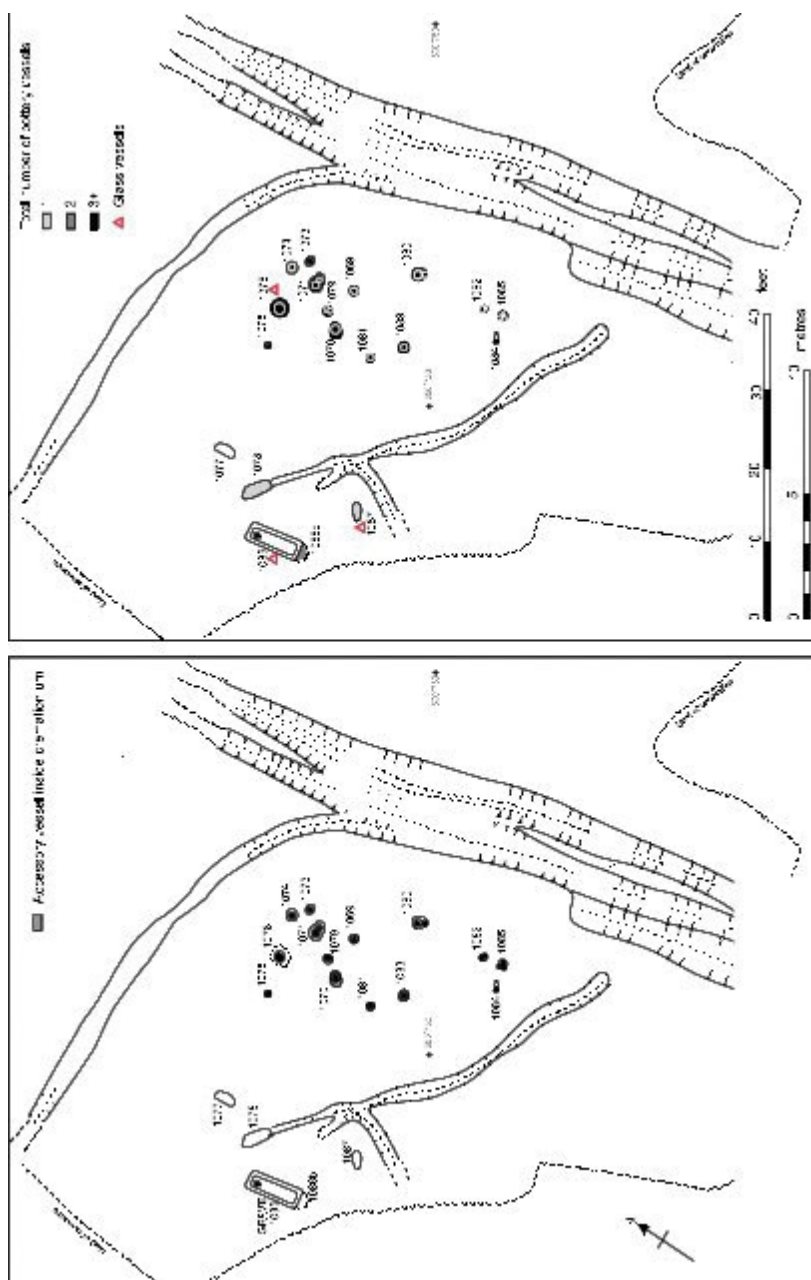


Figure 4.74. Plan of Cemetery IV showing cremation burials where accessory vessels are placed inside the cremation urn (left); right, plan showing total number of pottery vessels per burial, and location of glass vessels.

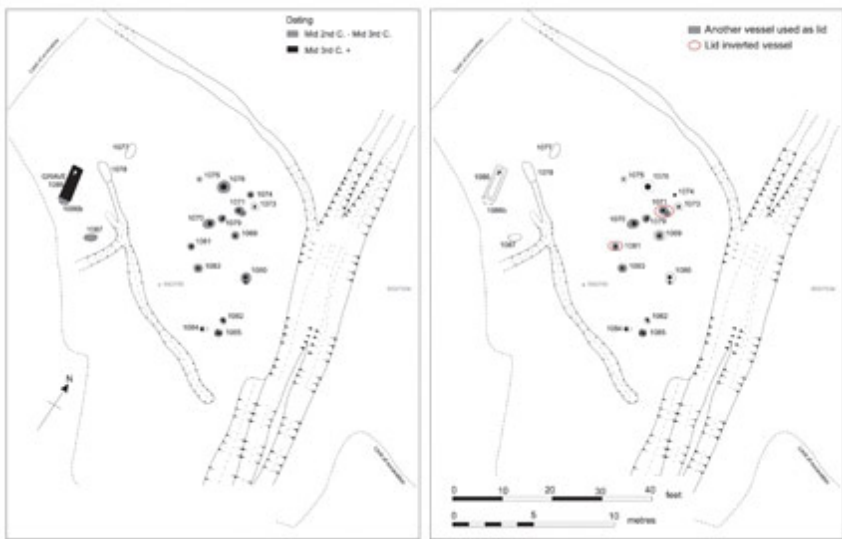


Figure 4.75. Plan of Cemetery IV showing dated burials (left); right, plan showing location of cremation burials where a vessel is used as a lid for another.

Possible Cremation Pits

Two of the unurned cremations may not be true cremations at all. Cremations 1077 and 1078 both had elongated oval grave-pits ($0.48 \times 0.3 \times 0.15\text{m}$ and $0.76 \times 0.45 \times 0.19\text{m}$, respectively), and both had minimal amounts of human bone present: just 3g in Cremation 1077 and 132g in Cremation 1078. These were the only two features in the cemetery to contain substantial amounts of charcoal: both had lower fills of charcoal or charcoally loam intermixed with fragments of burnt bone. Moreover, there were signs of scorching on the edges of the grave-pit in Cremation 1077, and most of the base of the grave-pit of Cremation 1078 was burnt red. There were no grave-goods with Cremation 1077, but Cremation 1078 produced several sherds of a very coarse grey ware Mucking jar. This was stated to not be the cinerary urn, but to be within the feature; several of these sherds were burnt. Both of these features should, therefore, be considered as cremation pits rather than cremations *per se*: their elongated shape, the presence of charcoal, minimal amounts of bone and lack of formal burial all point to their being the location where the cremation itself had taken place (*cf.* McKinley 2000), with the majority of the bone then being removed for burial elsewhere (the burnt pottery sherds in

Cremation 1078 should perhaps be considered as evidence for a jar being included as a pyre-good). Their physical location on the periphery of the cemetery would also support this interpretation.

The only other possible unurned cremation, Cremation 1084, is harder to interpret, due to the quality of recording. This, too, was an elongated oval feature, albeit smaller than Cremations 1077 and 1078 ($0.38 \times 0.21 \times 0.09\text{m}$ deep, but it had been heavily truncated). Within the fill of light brown loam there was a central patch of dark charcoally loam and 95g of cremated bone, and it was associated with fragments of a Mucking jar. While it could have been a cremation feature like the two discussed above, it could equally have been a simple urned cremation; the truncation makes this hard to determine.

The Use of Accessory Vessels

In several cremation burials, a dish appeared to have been used as a lid for the cinerary urn. This was witnessed in Cremations 1069, 1070, 1071 (two cases), 1079 and 1083, with a seventh candidate in Cremation 1085 (truncation had caused the uncertainty). In almost all cases these lid vessels were grey ware dishes, and where noted these seem to have been inverted over the mouths of the grey ware jars used as cinerary urns. The one exception to this was in Cremation 1070, where a samian vessel had been placed the right way up into the mouth of the jar. This is the one instance where the vessel could have acted as a food container, as well as a lid. With the exception of the possible example Cremation 1085, these lidded burials are located in a tight cluster in the western half of the cemetery, and (like the below-discussed accessory vessels occurring inside cinerary urns) may represent a localised practice of a family or other social grouping. This use of accessory vessels as lids was also possibly seen in Cemetery II (a tentative identification of this was made for Cremation 885), but its consistent use in Cemetery IV is most interesting, given the rarity of this practice in Romano-British cemeteries generally. While platters are often used as covers for the urn (to prevent soil entering), they were still generally used as food dishes, and were upright; inversion rules them out for this purpose. A few examples of inverted lids are now known, however. Cremation B325 at the Eastern Cemetery of London (Barber and Bowsher 2000, 109, fig. 77) saw the cremation urn covered by an inverted BB2 dish/bowl, with both vessels placed within an amphora with a tiled lid; this burial probably dated to the mid second century. A much later example was seen at Kelvedon, where the base of a shelltempered jar was used as the lid for a Hadham-ware face pot in Cremation 67 (Rodwell 1988, app. 1.B2). Cremation 8 at Great Dunmow (Wickenden 1988, 19) saw a platter inverted within the cremation urn, covering the cremated bone

deposit inside. These examples are, however, single instances within larger cemeteries: the high incidence of this practice at Mucking Cemetery IV points to a more established tradition.

The placing of the accessory vessels also varied. These were placed inside the cremation urn in Cremation 1070 (a small grey ware flask), 1071 (a grey ware bowl and dish), 1076 (a samian beaker and flagon), 1081 (a narrow-necked grey ware jar), and 1083 (a small grey ware flask). These were all located in the western half of the cemetery, and could indicate familial practices, especially as three cases (Cremations 1070, 1071 & 1083) were also lidded burials (Fig. 4.75 right).

Two of the cremation burials had glass vessels included as part of the grave furnishing. Cremation 1076 had a glass unguent bottle, while Cremation 1087, although disturbed out of position by the dragline, appeared to be associated with two glass vessels. The use of glass vessels as gravegoods is strongly clustered in the southeast of England, and sees its peak of popularity in the mid to later second century AD (Philpott 1991, 115–18).

Multiple Cremations

Three of the cremation burials apparently contained the remains of more than one individual: Cremation 1080, with two adult females, and Cremations 1083 and 1085 both had an adult male and adult female. These were all in the eastern half of the cemetery, and each contained relatively high amounts of bone from their respective individuals (Cremation 1080, 780g & 1100g; Cremation 1083, 1300g & 870g; Cremation 1085, 780g & 690g).

Other Offerings

Newly-identified Cremation 1086b, with its grey ware jar and flask, contained an interesting assemblage of animal bones alongside the human (the presence of human remains was noted on the pottery bags in the archive, but have not been located for analysis). These probably comprised a whole goose skeleton (fragmentary remains from all parts of the skeleton were recovered), along with the head of a piglet (identified bones comprised frontal and squamous temporal fragments, right maxilla, right mandible and two lower incisors). Although the disturbance of this burial by the stone coffin insertion means that we cannot be certain how the vessels, animal and human bones were arranged in the grave, that the animal bones were unburnt clearly indicates grave- rather than pyre-goods. Animal offerings in cremation burials are frequent (Philpott 1991, 197–200), and almost certainly under-recognised. Several have recently been identified at Stansted

Airport (Havis and Brooks 2004, 251–3), where pig and chicken remains are predominant, and include the neonatal pig in Cremation 12 and the cleaved skulls of young pigs from Cremations 15 and 17 (all of these burials dating to the mid to late first century AD). Chicken bones were found in Graves 12, 17, 13 and 15, with whole carcasses present in the latter two. The inclusion of goose bones in Cremation 1086b is, however, as yet unparalleled.

The status of this cremation cemetery would appear to be relatively high: with an average of 2.24 pottery vessels per cremation (ave. bone weight 715g), and a low proportion of single urn cremations, Cemetery IV has more in common with other cemeteries in Essex and Hertfordshire than do Cemeteries I and III (*cf.* Philpott 1991, 33), albeit with some unusual practices in evidence.

The Stone Coffin Burial

Grave 1086 comprised a stone coffin with a wooden lining (either a bier or an inner coffin), within which the adult male individual had been given a ‘plaster’ burial. The only grave-good was a mid–late fourth-century glass beaker placed within the coffin itself. This burial was published by Tom Jones (1979), and sections of that report are drawn on here. The grave-pit for the coffin was not visible in the brickearth (the ‘pit’ at its southern end is now identified as an earlier disturbed cremation burial), but the coffin was observed to rest partly on top of a stratum of stiff gravel, which may have caused it to tilt slightly (*ibid.*, 26), and perhaps cause the breakage observed on the northern side. Grave 1086 was orientated WNW–ESE, with the head towards the west, and the body was supine and extended, although the only part of the skeleton that remained *in situ* by the time of

excavation were the legs below the knee (other bones having been removed to the quarry office). Preliminary examination of the bones by Carol Crook (very few of which were missing) indicated an adult male of 25–35 years, without any obvious signs of disease (Jones 1979, 27).

The coffin itself was fashioned from a single block of oolitic limestone, with the lid also from one block. The overall weight of the two combined was calculated (by John Webb) as approximately a metric ton. Various identifications of the stone source were suggested: John Cooper and C.P. Palmer of the British Museum (Natural History) suggested Lower Bajocian Lincolnshire Limestone (archive letter dated 17/10/84); J.N. Carreck of Queen Mary College, University of London, suggested Middle Jurassic oolitic limestone from the Cotswolds or surrounding areas (archive letter dated 12/12/78), while F.W. Anderson of the Department of Environment Laboratory also identified it as a Jurassic oolitic limestone, probably from Lincolnshire, but possibly from Normandy (archive report dated 29/8/80). On this basis, a Lincolnshire source seems the most likely. Tom Jones described the coffin thus:

The coffin had been cut from a single block of stone and was 2 m. 3 cms. long, 66 cms. wide and 43 cms. deep. The sides and ends were 10 cms. thick and these had been neatly tooled on both sides. However, the bottom of the coffin, both inside and out, had been left rough, and it was of uneven thickness. The lid had also been cut from a single block, and it was just over 2 m. long, 68 cms. wide and 18 cms. thick. The weight of the coffin and lid has been calculated by John Webb from its volume as just under one ton. (Jones 1979, 26).

In section, the inner wood lining (indicated by a brownstained clayey fill at the foot-end of the coffin, associated with 13 iron nails) was approximately 3.2cm thick; notebook sketches suggest that it provided a barrier between the 'plaster' within the coffin and the coffin itself. Stains were also seen running up both sides of the coffin, although distorted on the left side of the grave, at the point where the stone coffin had broken in antiquity, pushing it inwards. This was interpreted as the remains of a bier (*ibid.*, 27), as the toe bones of the skeleton were observed to overlie the wood staining at the end of the coffin.

The legs of the skeleton (all that remained *in situ*) were observed to have been encased in plaster 9mm deep, and further plaster remained

on the floor of the coffin to the west. The generic term ‘plaster burial’ is used in discussions of Romano-British burials where chemical analyses have not been employed to distinguish the use of gypsum (hydrated calcium sulphate $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) from that of slaked or quicklime (recrystallised calcium carbonate; Philpott 1991, 90). Chalk, or lime, may also have been used. Grave 1086’s coating was identified as calcium carbonate, after simple chemical testing by Paul Barford (archive report dated 14/11/78; the sample tested contained much carbonate, but no sulphate). The burial, therefore, probably employed quicklime rather than gypsum. A number of the burials in the Eastern Cemetery at London employed a similar rite (Barber and Bowsher 2000, 101–4). At that site, the chemical composition of the white substance associated with 81 burials (many of which were in nailed wooden coffins) was also identified as calcium carbonate, but it seemed to be uncrystallised, and had probably been mixed with water to form a slurry that was then used in the burial rite. The majority of the London burials date to the third and fourth centuries, but a minority predate this.

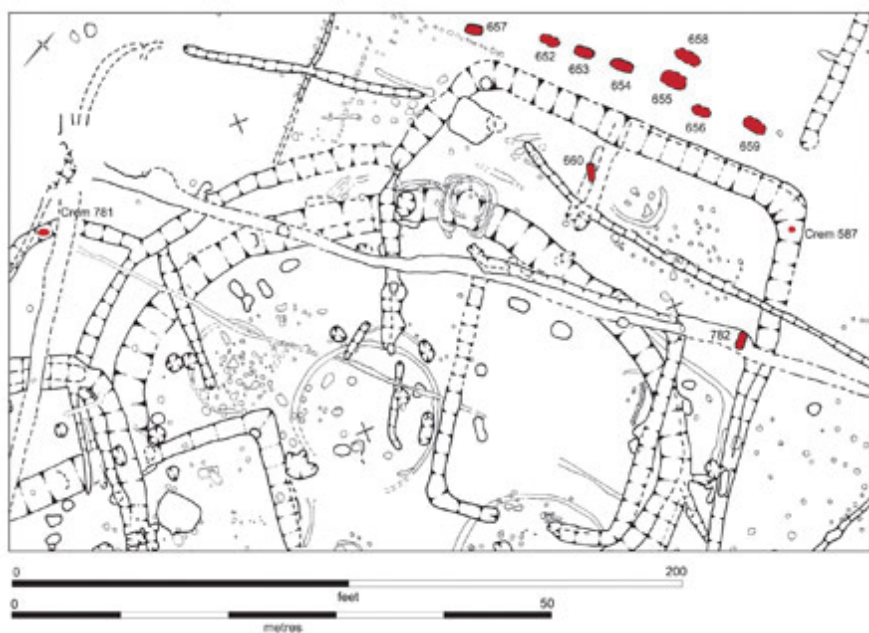


Figure 4.76 . Plan of Cemetery V.

‘Plaster’ burials are most frequently found in association with stone coffins (as here), but the rite is also seen with lead or wooden coffins (Philpott 1991, 90). Their distribution is largely an urban one, and

towns such as Dorchester, London, York and Colchester see major concentrations (*ibid.*), although some rural hinterlands (such as those around York) see a scatter of examples. In rural Essex and Hertfordshire, examples are known from Kelvedon, Bishops Stortford and Enfield (Philpott 1991, fig. 22). While several of the clusters of plaster burials are known to have used local gypsum sources (such as those in Yorkshire, Dorset and Sussex), the chalk for Grave 1086 is likely to have been available locally (Philpott 1991, 91). In these areas, true gypsum burial was restricted to high-status burials (*ibid.*), although the use of the stone coffin here indicates an elevated status for Grave 1086, even with its locally sourced plaster.

The rite is usually interpreted as an attempt to preserve the body, as plaster both absorbs the liquids of decay produced by the body, while also preventing moisture from coming into contact with it (Philpott 1991, 92).

The religious associations of plaster burial have been debated. It was certainly seen in later Roman Christian cemeteries, such as Poundbury and Trier (Ramm 1971, 190), although it is also known from graves that seem to have non-Christian affiliations, as indicated by north– south burials at York. Green (1977, 48–52) argues more insistently for it being a Christian rite, one that was ‘a rite of significance only to followers of the faith’ (although the new data on ‘chalk burials’ from London’s Eastern Cemetery would contradict this). In being a rite reserved for those with wealth and high status, however, its use may have transcended religious affiliation (Philpott 1991, 94), although it may well have suited the greater concern with the physical integrity of the dead body associated with Christianity (Macdonald 1977, 37; Philpott 1991, 94).

The one definite grave-good with Grave 1086 was the glass beaker, found set into the plaster by the left foot of the skeleton, with only the lower part remaining. There is a strong association of glass vessels with plaster burials (Philpott 1991, 92).

Most dateable gypsum burials are fourth-century (Philpott 1991, 91), and stone coffins also appear to become more common at this time (*ibid.*, 92). The glass beaker would appear to place the burial in the mid to late fourth century. Contemporary stone coffin burials in this region include those from Old Ford, Bow on the Roman road from London to Colchester (Sheldon 1972), Rainham (described in Jones 1979, 30, n.4) and south of the Thames at Keston in Kent (Mynott 1978), but they are generally more common in urban cemeteries such as at London and York. The Keston burial was also of an adult male, supine and extended, but with the head to the southeast, in a coffin of Kentish Ragstone, with a layer of liquid gypsum poured over the body. The coffin had been buried within a substantial vault dug into solid

chalk; it was associated with the villa site, but lay at a distance from the main villa cemetery. Perhaps more similar was the burial at Old Ford: although of a female aged 25–30, the head was to the west, the coffin (of similar dimensions to Mucking) was carved from a single block of oolitic limestone and calcium carbonate, in a semi-liquid state, was found under the body (Sheldon 1972). It was not, however, datable, unlike the double burial at Rainham, the two skeletons lying head to feet in a coffin of shelly oolitic limestone with a glass vessel and a coin probably of Tetricus II (AD 270–3). Oddly, this burial also seems to have disturbed an earlier cremation burial (Farmer 1928).

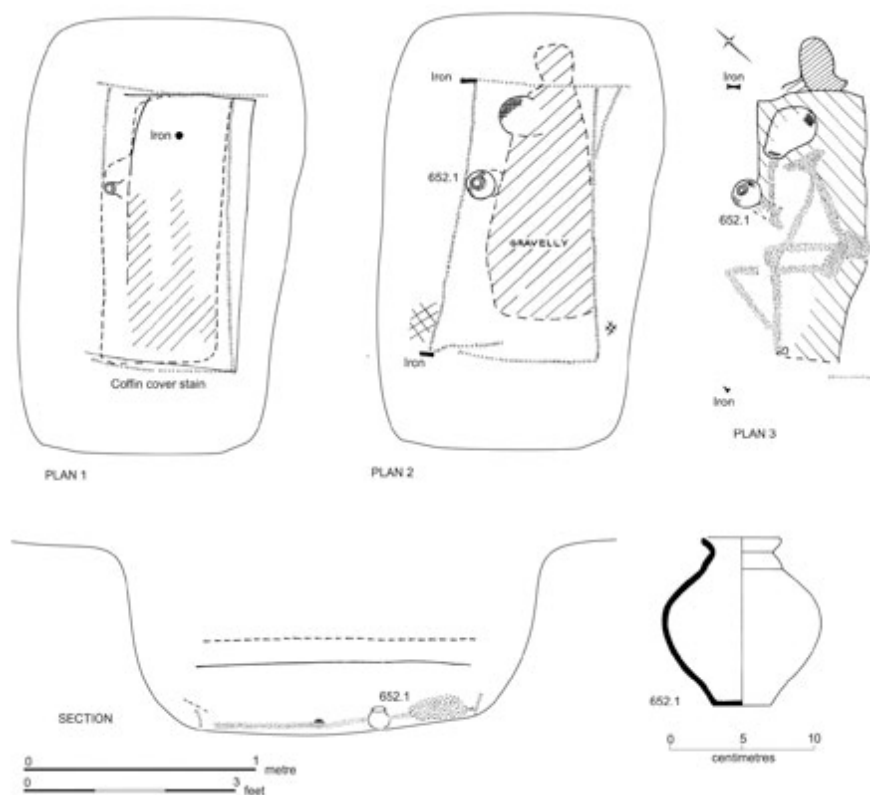


Figure 4.77. Plans, section and grave-goods from Grave 652.

The 17 cremations of Cemetery IV were mid second to early third-century in date; it remains unclear why a fourth-century gypsum burial in a stone coffin was inserted into the same area (cutting a cremation as it

did so).

Cemetery V with Jo Appleby

The nine inhumation burials running up the side of the 'Belgic' enclosure were judged to be a largely contemporary group (Fig. 4.76): they shared their NE–SW alignment, and were characterised by low levels of grave furnishing. Several displayed flexed burial positions and coffined burial, and all seemed to be of adults. Grave-goods were limited to a wheelthrown burnished pot in Grave 652. The vessel has been dated to the early to mid first century AD, and it is therefore assumed that all these burials are of the same date, or slightly later. Three nearby cremation burials are also described as part of this cemetery. Grave 782 was an inhumation-shaped feature (dug in the field as two separate pits), with at least two complete pottery vessels and the remains of a third. This seems to have been a NW–SE orientated furnished inhumation of the mid second century AD, but its poor recording and truncation by a modern ditch means that little further can be said. It lay to the north of the 'Belgic' enclosure system. In both its furnishing and its location, this burial stands out as different.

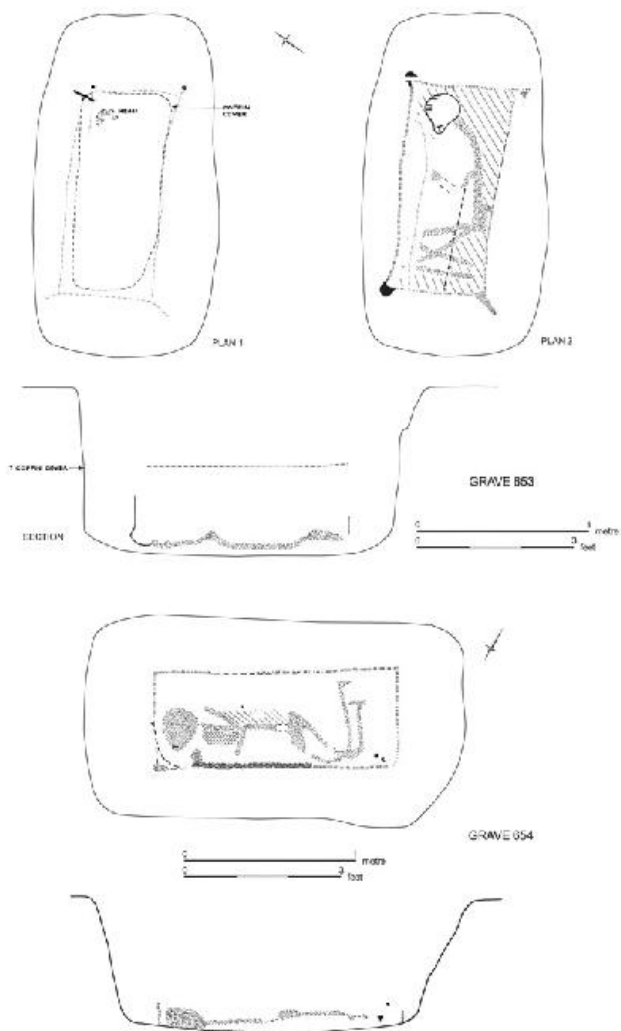


Figure 4.78. Plans and sections from Grave 653 and 654.

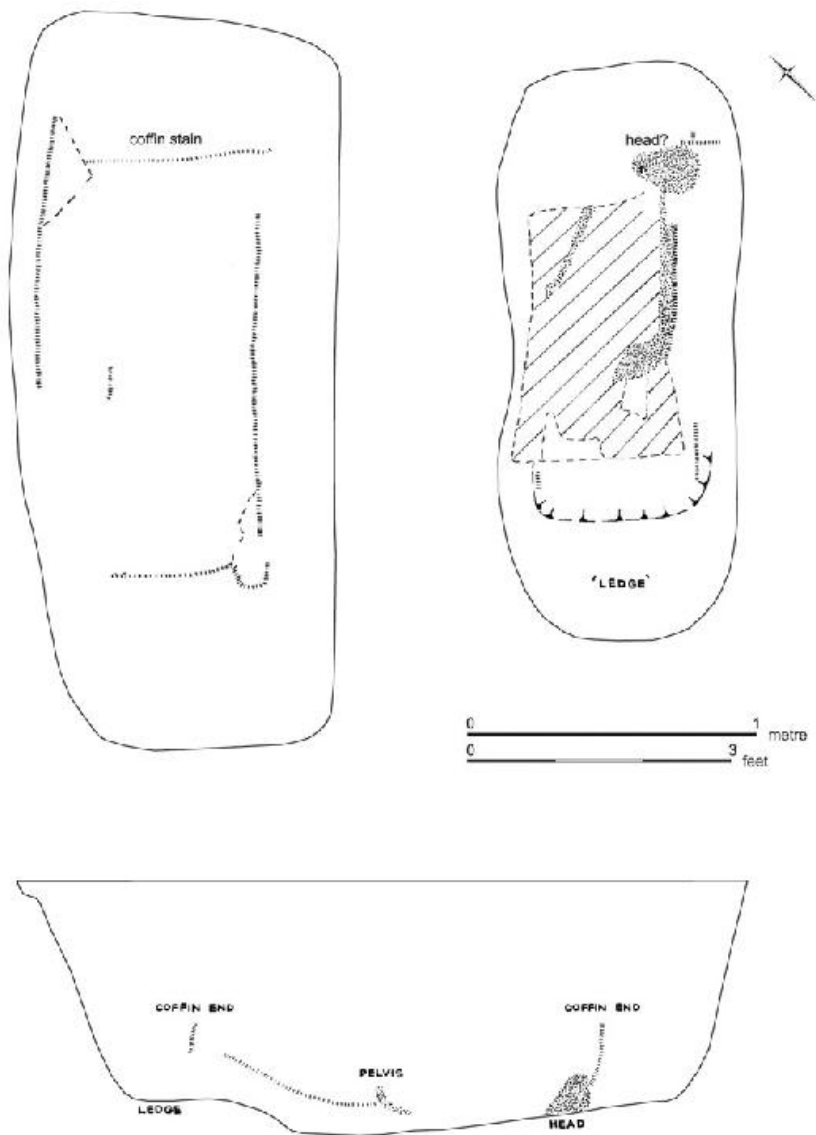


Figure 4.79. Plans and section of Grave 655.

As outlined above, there is nonetheless ambiguity in the attribution of some of these burials, and this cemetery may have had Late Iron Age origins (hence its simultaneous assignation as Prehistoric Cemetery III).

Grave Catalogue

Grave 652. (1297N/111E) Adult (Fig. 4.77)

Notebook 141.14, 25, 26

Grave pit: Roughly rectangular with slightly rounded corners, near-vertical sides and level base.

Pit fill: 'colloidal' clay and grey-brown replacement silt.

Grave furniture: Black-brown coffin stain (1.16m × 0.53m) and two iron nails.

Grave-goods:

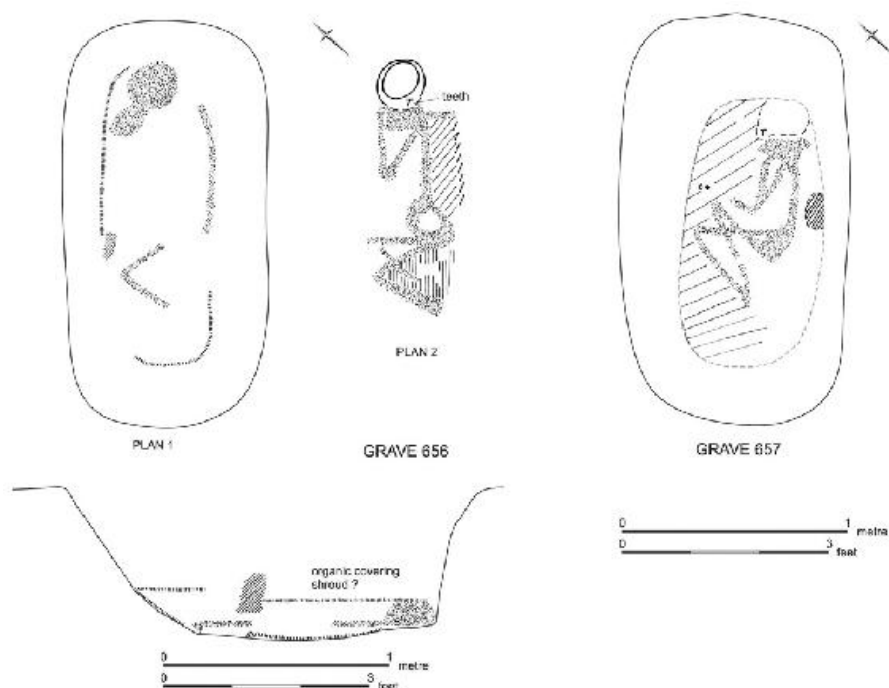
652.1 Narrow-necked jar in NSP fabric. There is a slight scored cordon on the shoulder; burnished (Rim 45mm; Ht 120mm; Base 36mm). This form is very similar to Cam 234B. Early to mid first century AD.

Bone: Clear three-dimensional body stain showing flexed burial lying on right side. Some bone survived in area of the head, teeth, and knees or femora. Soil matrix with several crushed dental crowns and one complete crown of molar indicates adult.

Grave 653. (1304N/118E) ?Adult (Fig. 4.78)

Notebook 141.17–18, 26

Grave pit: Rectangular with rounded corners, vertical sides and flat base.



Pit fill: No data.

Grave furniture: Black-brown coffin stain ($1.21 \times 0.53\text{m}$), with corner 'horns' suggesting that the coffin boards had staved in.

Grave-goods: No data.

Bone: Only a body silhouette. Body appears to be flexed and lying on its right side. One possible tooth root tip thought perhaps to indicate an adult (as does the size of the body stain).

Grave 654. (1313N/126E) ?Adult (Fig. 4.78)

Notebook 141.11–12, 26

Grave pit: Rectangular with rounded corners, near-vertical sides and flat base. Grave very large for the coffin within it. *Pit fill:* 'colloidal' grey-brown silt and an area of greyish Thanet sand (possibly replacement silt) along southern edge of grave.

Finds in fill: Hazelnut.

Grave furniture: A brown coffin stain ($1.38 \times 0.58\text{m}$), with the coffin space suggested by a gravelly fill. Fragments of 3 iron nails.

Grave-goods: No data.

Body: Only a brown body stain, with the remains of some bone in the right leg and some teeth [no dental report]. Size of stain suggests adult.

Grave 655. (1325N/137E) Mature adult (Fig. 4.79) Notebook 141.9–10, 26

Grave pit: Oval, with steep sides and undulating base.

Pit fill: Gravel.

Grave furniture: Black-brown coffin stain ($1.45\text{m} \times 0.73\text{m}$; in places grey replacement silt instead). No nails recorded.

Grave-goods: No data.

Bone: Poor body stains of head, pelvis and possibly spine. Crowns (hollow) of three lower molars and two premolars and more debris of other teeth. Wear stage 4+ suggests middle aged person.

Grave 656. (1330N/149E) ?Adult (Fig. 4.80)

Notebook 141.15–16, 26

Grave pit: Roughly oval, with sloping sides and rounded base.

Pit fill: Gravelly.

Grave furniture: A stain against the sides of the grave and over the top of the body could possibly be a dugout coffin; it does, however, follow the profile of the grave so closely that it may instead represent a shroud or other pliable wrapping.

Grave-goods: No data.

Bone: Only body stain and some teeth remained [no dental report].

The head and legs were fairly clear. This appears to have been a flexed burial on its right side. Size of stain suggests adult.

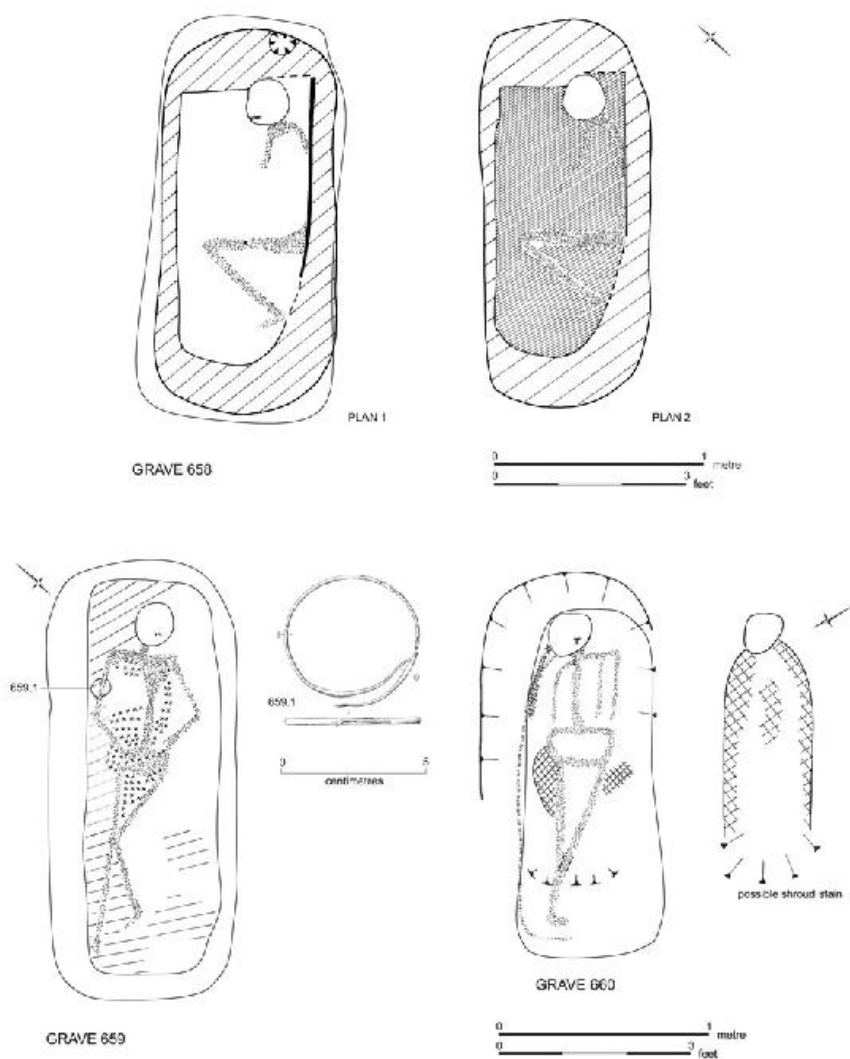


Figure 4.81. Plans and grave-goods of Graves 658, 659 and 660.

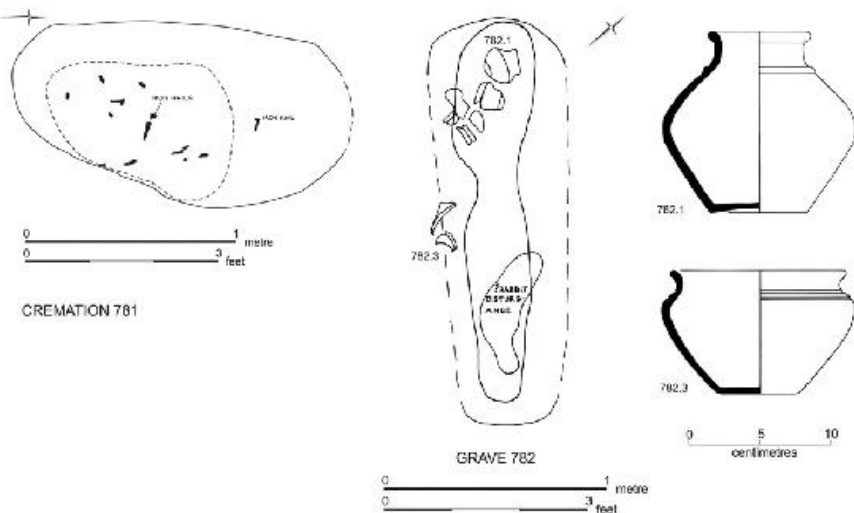


Figure 4.82. Plan of Cremation 781, and plan and grave-goods from Grave 782.

Remarks: Excavated in poor weather (residual finds tray stated to have blown over in a gale, losing some scrappy sherds of pottery).

Grave 657. (1278N/102E) Old adult (Fig. 4.80)

Notebook 141.19–20, 26

Grave pit: Roughly rectangular with rounded corners, nearvertical sides and flat base.

Pit fill: No data.

Grave furniture: Vaguely rectangular black stain below body, thought to be a bier.

Grave goods: None recorded.

Bone: Three-dimensional body silhouette and some teeth. Left leg shown to overlie right. Body lies on its right side in crouched position. Teeth comprise crown of a lower canine, rather heavily worn, suggests old adult.

Remarks: Shallower and smaller than other graves in group, probably due to being cut into hard orange gravel.

Grave 658. (1333N/132E) Adult (Fig. 4.81)

Notebook 141.21, 26

Grave pit: Roughly rectangular with rounded corners, steep sides and flat base.

Pit fill: Grey-brown silt/sticky almost pebble-free loam. Orange-brown pebbly fill.

Grave furniture: Possible dark brown coffin mark (1.21m × 0.66m); rectangular at the head end but rounded at the feet.

Grave goods: None recorded.

Bone: Poor body stain with only head and pelvis; body flexed on the right side. Crowns of molars suggest adult, as does size of body stain.

Remarks: Planned rather sketchily due to haste for conveyor move, rain, and trampling. Noted as Prehistoric or RB.

Grave 659. (1343N/158E)?Adult (Fig. 4.81)

Notebook 141.23

Grave pit: Rectangular with rounded corners, near-vertical sides and flat base.

Pit fill: Greyish loam and light brown, fairly pebbly, sticky gravel.

Grave furniture: No sign of a coffin, shroud or bier.

Grave goods:

659.1 'D'-shaped copper alloy bangle (Lab. No. 715199) found *in situ* around arm. Could date from later IA to later Roman.

Bone: Only body silhouette and teeth (one whole and fragments); body is supine and extended, with hands resting on the pelvis and the left leg slightly bent. Teeth only exist as fragments; size of body stain indicates adult.

Grave 660. (1293N/154E) Adult (Fig. 4.81)

Notebook 141.30–2

Grave pit: Truncated, but roughly oval.

Pit fill: No data.

Finds in fill: Residual first-century AD pottery sherds (c. 30, with part of a possible Butt beaker, a grey sherd possibly from one of the kilns on site, and a vesicular sherd), and possible fired clay (loom weight?).

Grave furniture: Dark brown stain interpreted as possible remains of shroud.

Grave goods: None recorded.

Bone: Body stain, with head right up against end of grave; body extended and supine, with arms either on pelvis or by sides and feet crossed. Size of body stain seems to indicate adult.

Cremation 587. (1338N/193E) Adult

NB 133.51

Grave pit: Cremation discovered during sectioning of 'Belgic' ditch; in section pit was steep-sided with stepped base, up to 0.46m deep. Appeared to lie at base of late loam in ditch.

Pit fill: Charcoal rich fill with cremated bone, an RB bodysherd and up to eight hobnails.

Grave furniture: None.

Grave goods: Hobnails possibly form part of the grave assemblage.

Body: Cremated bone mainly in upper fill (there was some doubt as to whether this was a rubbish deposit, rather than a cremation, but identification of the bone as adult human indicates that this is a burial).

Cremation 781. (1136N/106E) Adult (Fig. 4.82)

NB 189.48

Grave pit: Rough sub-oval hollow, up to $1.62 \times 0.85 \times 0.15\text{m}$ deep.

Pit fill: Scattered burnt bone and charcoal in a concentration sitting within an area of dark loam measuring $0.93 \times 0.63\text{m}$ wide.

Finds in fill: Ten to 12 iron nails and fragments, and sherds of rouletted colour coat ware.

Grave-goods: No data.

Bone: Poor preservation; complete burning; white in colour; 98g; Max L. 26mm.

Grave 782. (1315N/217E) (Fig. 4.82)

NB 192.22–5

Grave pit: Elongated oval. Overlain and truncated by modern ditch. Excavated as two pits, rather than as grave, but shape and contents of feature suggest an unrecognised inhumation burial, c. $1.75 \times 0.62 \times 0.48\text{m}$ deep.

Pit fill: Light/medium brown/grey sandy loam with random pebbles, and dark/medium charcoal fill with random pebbles.

Grave furniture: No evidence recovered.

Grave-goods:

782.1 Narrow-necked flask in GRY fabric, with cordon on the shoulder (Rim 70mm; Ht 130mm; Base 58mm; EVE 0.96). Mucking product (KB02). AD 110/20–180/90.

782.2 [Not illus] Storage jar rim in GRY fabric. Sherd only. AD 110/20–230/50.

782.3 Sherds of a small cordoned bowl; Mucking product (CE01). AD 50/60–80/90.

Bone: No data.

Overview

Traces of coffins were found in six of the graves; these were generally of rectangular or slightly oval shape and were held together with iron nails. The size of the coffins was relatively modest and related to the size of the flexed corpse: the largest was 1.45m long by 0.73m wide and the smallest 1.16m long by 0.53m

wide. In three cases 'horns' could be observed at the coffin corner, suggesting that the coffin boards had been staved in by the pressure of the earth from outside them. In Grave 657, the stain was limited to the area underneath the body and for this reason was interpreted as a bier. A different construction is seen in Grave 660 (the isolated grave). In this case there is no coffin or bier, but a stain around the body is interpreted as the remains of a shroud. The only grave with no evidence of grave furniture is Grave 659. This grave was the most easterly of the burial line and belonged to the only individual with a surviving personal ornament: a bangle. Interestingly, this individual was placed in a different position to the norm, being extended and on its back rather than flexed on its right side.

While inhumation is usually considered a minority rite in the Late Iron Age to Early Roman period, it seems particularly associated with younger burials, which is apparently not the case here. Although inhumation cemeteries of this date are rare (as opposed to the occasional use of inhumation within cremation cemeteries), there is a growing body of evidence from Cambridgeshire and other regions that it may in fact have been more common than realised (Evans *et al.* 2008; Pearce 1999).

Smaller Cemetery Groups

Apart from the four cemeteries described above, there were further disparate clusters of Romano-British burials. These were all cremation burials; the northern group seems to date to the mid second century, while

the southern group dates from the later first century to the earlier third century.

The Southern Group

Cremation 80. (170N/246E) Adult (Fig. 4.84)

NB 18.1

Grave pit: Roughly circular, with sloping sides and flat base, measuring $0.61 \times 0.51 \times 0.15\text{m}$ deep.

Pit fill: No data.

Grave-goods:

80.1 Storage jar in GVC fabric. Only the lower quarter of the body and base were present. Used as cinerary urn (Base 140mm). Impossible to date with certainty, but a local product.

80.2 [Not illus] Sherds of a red (beaker?) base. These appear from the sketch plan to have been inside 80.1. Not seen. *Bone:* Cremated bone found. Some within the broken grey ware pot. There also appears to have been a spread out to the side of the pit. Poor preservation; complete burning; white-black in colour; 152g; max L. 34mm.

Cremation 81. (173N/243E) Adult (Fig. 4.84)

NB 18.1

Grave pit: Roughly circular, $0.3 \times 0.25 \times 0.05\text{m}$ deep.

Pit fill: No data.

Grave-goods:

81.1 Storage jar in GVC fabric. As 80.1, only the lower quarter of the body and base were present. There is a cordon above the foot-ring base. Used as a cinerary urn (Base 128mm). AD 70–200+, but the foot-ring base suggests a date within the first century AD.

Bone: Cremated bone found inside 81.1. Poor preservation; complete burning; white in colour; 33g; max L. 37mm.

Cremation 82. (35N/314E) Adult Male (Fig. 4.85)

NB 14.1

Grave pit: Shallow (truncated), sub-rounded, $0.62 \times 0.52\text{m}$, depth uncertain.

Pit fill: Lower fill very dark (charcoal, and some bone), upper fill of pot very sandy.

Grave furniture: None, but five nails from pit and pot probably from burnt bier.

Grave-goods:

82.1 Jar in GVC fabric with grass impressions on the body. The rim

and upper part of the vessel are missing (see Cemetery IV for similar vessels). Used as the cremation urn, with other vessels placed inside; rim may have been knocked off to allow this (Base 112mm). The small foot-ring would suggest a first-century date; the associated vessels give better dating evidence.

82.2 Base of a flagon with foot-ring base in VRW fabric with some white slip. The rim and neck are missing (Base 38mm). AD 120/30–60/70.

82.3 Shallow bowl with incipient bead rim in GFN fabric (Rim 150mm; Ht 62mm; Base 115mm; EVE 0.95). Mucking product (RB03). AD 100/10–250/300.

82.4 Complete Drag 33 (diameter 130mm). EGR; unstamped, first half of the third century. The foot is worn.

Bone: Found in 82.1. Bone in fragments; incomplete burning; white-black in colour; 596g; max L. 42mm.

Remarks: One of a group of three burials at the SW corner of 'RB II' enclosure.

Cremation 83. (36N/312E) Adult Male (Fig. 4.85)

NB 14.1

Grave pit: Sub-rounded, 0.63 × 0.54m, depth uncertain.

Pit fill: Lower fill, blackish (charcoal?). Some bone noted. *Grave furniture:* Two square-sectioned iron nails, in pit and grave fill, and unidentified 'Iron' from fill.

Grave-goods:

83.1 Largely complete Drag 31 platter. Saturninus ii lc 31 SATVRNI·OF Lezoux^a. Saturninus' stamps occur on forms 31R, 79R and 80, in the Wroxeter Forum destruction and at Pudding Pan Rock. There is no dating evidence for this particular stamp. c. AD 160–200.

83.2 High-shouldered jar in GVC fabric, with rim and upper part of body missing (Base 120mm). See 82.1 and Cemetery IV for similar vessels. Used as cremation urn, with other vessels placed inside. This form tends to be later than footring jars. AD 70–200+.

83.3 Ring-necked flagon in VRW fabric. Foot-ring base; single groove on handle. Orange with remnants of white slip, damaged and abraded (Rim 35mm; Ht 140mm; Base 40mm). Very similar to Marsh and Tyers IB.8; AD 120/30–200.

Bone: In large fragments; incomplete burning; white-brown in colour; 1310g; max L. 73mm. Position (whether in pot or on floor of grave) not stated.

Remarks: One of a group of three burials at the SW corner of 'RB II' enclosure.

Cremation 84. (38N/310E) Adult (Fig. 4.86)

NB 14.1

Grave pit: Not recorded.

Pit fill: 'Sandy'.

Grave furniture: One iron ring, and one nail head were found in a pot (uncertain which one).

Finds in fill: ?fired clay, and 'two iron objects'.

Grave-goods:

84.1 Jar in GRY fabric. Both the rim and base are missing. Impossible to date.

84.2 Narrow-necked globular jar. White slip on the neck and shoulder; burnished band above the base; rim is missing (Base 45mm). Mucking product (KA??). AD 110/20–200/10.

84.3 Large corroded and burnt iron finger-ring, with tapering broken hoop. The presence of a bezel is suggested by the widening and thickening of the ring towards the middle, but the ring is firmly adhered to a piece of cranial bone. W. c. 14mm, Th. c. 5mm.

Bone: Poor preservation; incomplete burning; white-blue in colour; 780g; max L. 63mm.

Remarks: W.T. Jones observed that 'some of these pots were not complete when they were placed in the burial', and argued that the larger urns may have been adapted to allow insertion of the smaller vessels. The grave plans do not seem to show the largest vessels, possibly indicating that these cremation urns were inserted into the ground, with the cremation pit not recognised.

Cremation 86. (72N/173E) Adult (Fig. 4.86)

NB 18.8

Grave pit: Sub-rounded. $0.68 \times 0.59 \times 0.22$ m deep.

Pit fill: No data.

Finds in fill: Residual pottery including a rounded red sherd. *Grave-goods:*

86.1 Storage jar in GVC fabric. The upper half of the body is missing. Used as cinerary urn; supported by pebbles within the pit. AD 70+.

Bone: Poor preservation; complete burning; white-blue in colour; 157g; max L. 43mm. Cremated bone appears to have spread out from the cinerary urn. Many of the bones were quite large and 'good'.

Cremation 132. (469N/179E) Adult (Fig. 4.87)

NB 28.122–3; 33.13; 37.61, 78; 40.35; 57.80

Grave pit: Sub-circular, with sloping edges and flat base, measuring $0.43 \times 0.43 \times 0.15$ m deep.

Pit fill: Some small pebbles used as packing around the cremation urn, on the west side where the pit was slightly wider. The lower fill within the cremation urn contained cremated bones; the upper fill produced the colour coat beaker, and was sandy brown loam with a few fragments of charcoal.

Finds in fill: Some black burnished sherds. Also, some 'greeny' vitreous slag was found in the fill of the pot, but appears to be residual.

Grave-goods:

132.1 Grey ware jar in GRY fabric. Rim and top quarter missing (Ht 170mm, Base 113mm). Incised lines above the base; dribbles of white slip down the outside; double wavy line above the white slip. Used as cinerary urn. Mucking product (?JB07/HA01); AD 120–230/50.

132.2 Beaker in GFN fabric with metallic finish (Ht 126mm, Rim 51mm; Base 29mm; EVE 0.05). Not a colour coat. Possibly Colchester Cam 395: a grey ware copy of colour coat vessels. AD 220/30+. Found inside 132.1.

Table 4.14. Summary of burial attributes for isolated cremations.

Grave No.	Sex	Age	Bone weight	Grave L.	Grave W.	Grave D.	Container/Marker	Footwear	Vessels	Other ornaments	Date
80	?	Adult	152g	0.61	0.51	0.15	Vessel	N	2		AD 70/80+
81	?	Adult	33g	0.30	0.25	0.05	Vessel	N	1		AD 70-200+
82	M	Adult	906g	0.62	0.52	?	Vessel	N	3		Early 3rd century AD
83	M	Adult	1310g	0.63	0.54	?	Vessel	N	3		Late 2nd century AD
84	?	Adult	780g	?	?	?	Vessel	N	2		AD 110/120-200/210
86	?	Adult	157g	0.68	0.59	0.22	Vessel	N	1		AD 70/80+
132	?	Adult	805g	0.43	0.43	0.15	Vessel	N	2		3rd century AD
135	?	?	?	0.60	0.60	0.29	Vessel	N	2	Finger-ring; brooch	AD 120-230/250
955	?	Adult	7g	?	?	?	Vessel	N	1		AD 50/60-100/110
1001	?	Adult	Traces	0.88	0.62	0.20	?Box	N	0		?
1002	?	Infans I	45g	1.19	0.82	0.21	?Box	N	0		?
1009	?	Infans I	7g	0.31	0.31	?	?Box	N	0		?
1028	?	Adult/Infans II	20g/150g	1.07	0.69	<0.13	Casket	N	5	Bronze plate; bronze rivet	AD 100-160

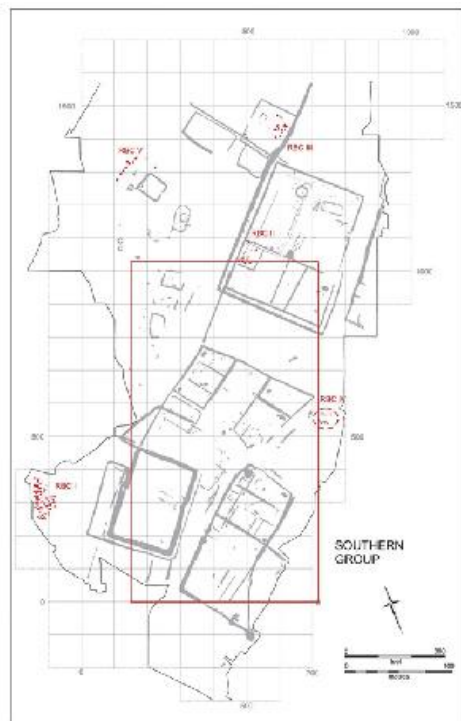


Figure 4.83. Plan of the southern group of isolated burials.

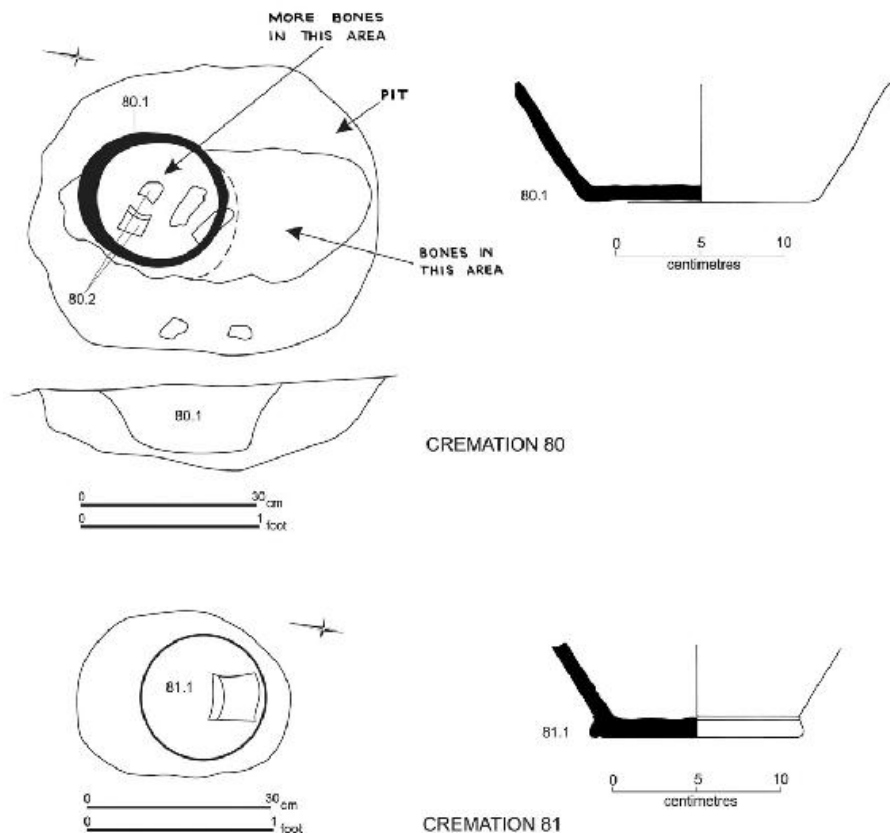


Figure 4.84. Plans, sections and grave-goods from Cremations 80 and 81.

Bone: Small fragments; incomplete burning; white/black in colour; 805g; max L. 58mm. Within the lower fill of the grey ware pot; some suggestion of deliberate arrangement of bones.

Remarks: M. Jones noted that the slag and residual BB sherds could have entered the pit during its original digging. This cremation is located in a corner where the RBI enclosure and another ditch meet.

Cremation 135. (332N/386N) (Fig. 4.88)

NB 49.7–9

Grave pit: Circular pit with sloping sides and rounded base, measuring $0.6 \times 0.6 \times 0.29\text{m}$ deep.

Pit fill: Dark loam immediately surrounding the cremation urn (135.1), with a lower fill of moist gravelly loam.

Grave furniture: None.

Grave-goods:

135.1 Storage jar in GVC fabric. Rim and top of the vessel broken. An undercut rim was found inside the vessel (Rim 180mm; Ht 185 + mm;

Base 124mm; EVE 0.24). Mucking product (JB07). AD 120–230/50. Used as cremation urn.

135.2 Shallow pie dish in GRY fabric (Rim 190mm; Ht 30mm; Base 170mm; EVE 0.34). Mucking product (RB03). AD 110/20–250/300.

135.3 Coiled copper alloy finger-ring with three loops and tapering terminals (unburnt), probably disturbed from high up in the fill of the cremation urn (AML No. 781; AE203). The ring is well preserved, although there is some metal loss towards the terminals. Edges on the central, wider loops show these were bevelled/chamfered. Diam. 18mm, mid-point W. 3mm, Th. c. 1.5mm, Wt 4g. The surface is pitted and corroded with evidence of burning; the ring has been stabilised. Coiled finger-rings are common personal items from Roman and earlier contexts and found in both settlement and burial contexts. Similar examples are known from Great Holts Farm, Essex (Germany 2003, 75) and Castleford, Yorkshire (Cool and Philo 1998, 58).

135.4 [Not illus] Bronze brooch, in poor condition, probably disturbed from high up in the fill of the cremation urn. Possibly burnt; one loop of spring coil survives (AML No. 782; AE204).

Body: No data.

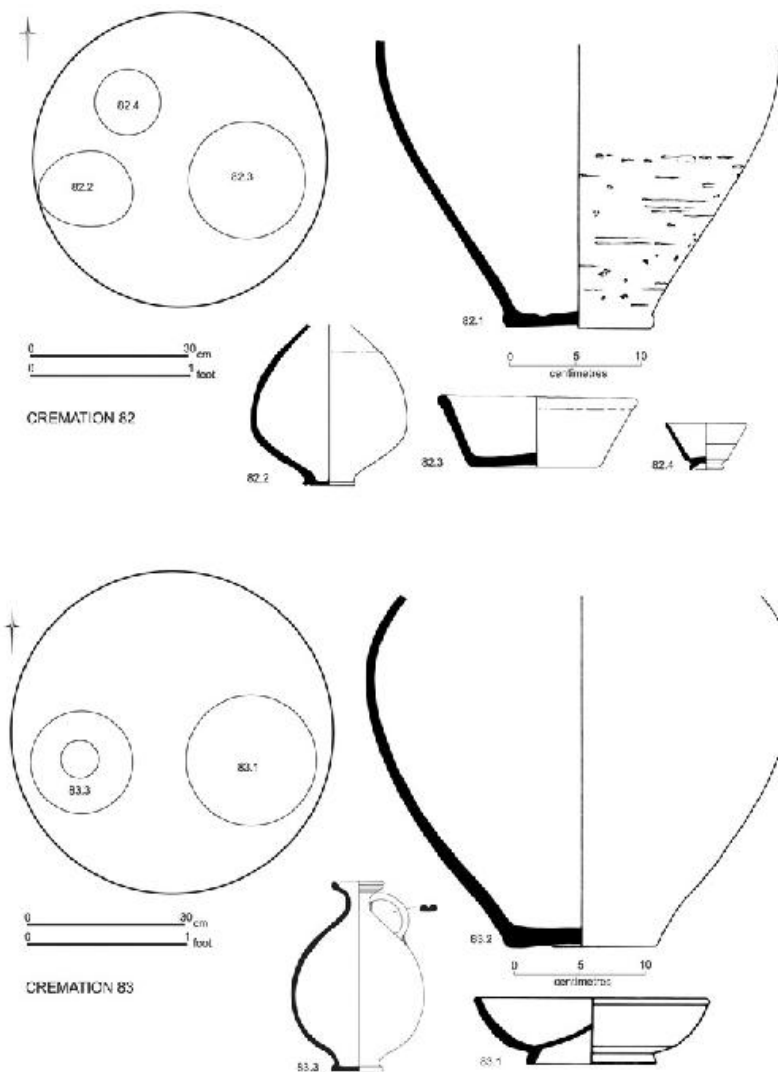


Figure 4.85. Plans and grave-goods from Cremations 82 and 83.

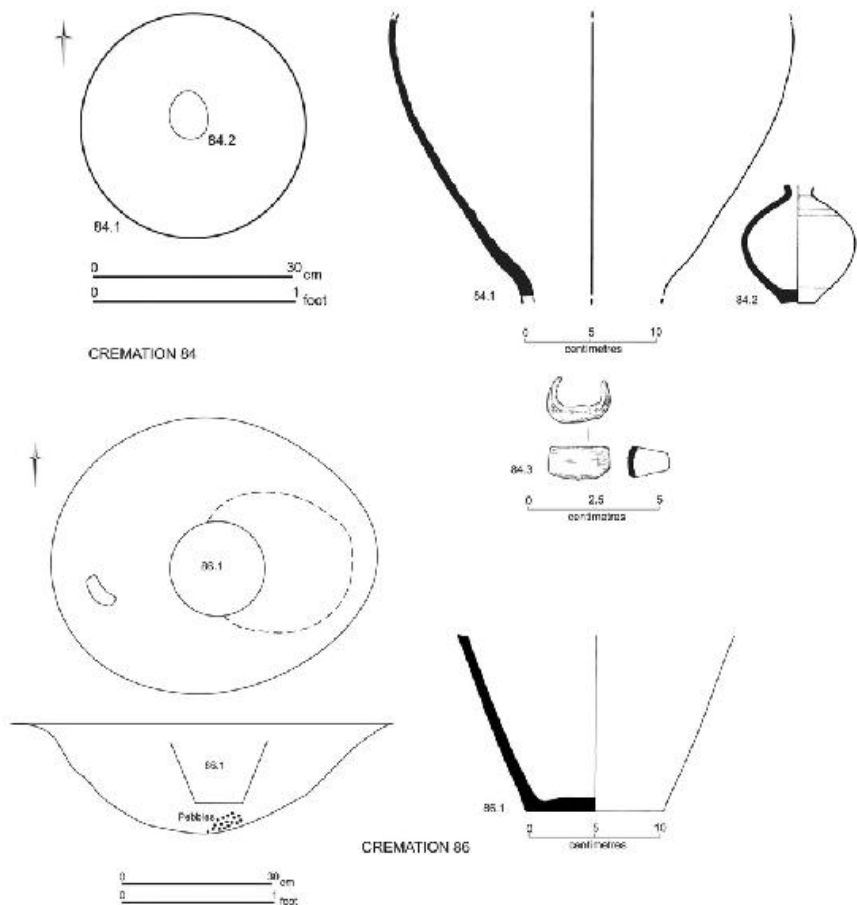


Figure 4.86. Plans, sections and grave-goods from Cremations 84 and 86.

Cremation 955. (1008N/698E) Adult (Fig. 4.87; feature not planned in field)

NB 233.110

Grave pit: No clear pit. Cremation was spotted within a ditch fill.

Pit fill: No data.

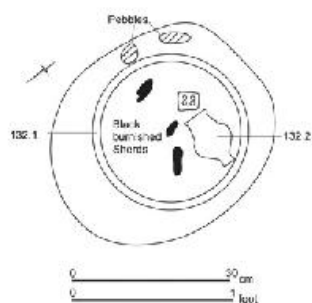
Grave-goods:

955.1 Ledge-rimmed jar in BLA1 fabric, with graffiti on the shoulder (Rim 156mm; Ht 200mm; Base 88mm; EVE 1.0). This form occurs in Essex and was made at Mucking (AB06) and Billericay. AD 50/60–100/10. Apparently used as cinerary urn.

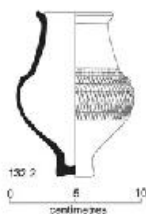
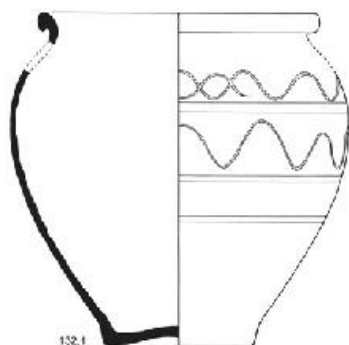
Bone: Poor preservation; complete burning; white in colour; 7g; max L. 11mm.

Of the nine cremation burials, the earliest in the sequence seems to be Cremation 955, with its mid to

later first-century ledge-rimmed jar; this was somewhat of an outlier, being located in the Central Enclosure, and has been included here for convenience. Otherwise, the group's cremations are relatively coherent; they were largely associated with ditched enclosures (either dug into the ditch or placed within the corner of an enclosure like Cremations 82–4). Their dating is generally second- to third-century, and they are characterised by having multiple vessels (rather than the single vessels seen in RB Cemetery V). Again, all cremations were identified as adults.



CREMATION 132



CREMATION 132



CREMATION 955

Figure 4.87. Plan, photograph and grave-goods from Cremation 132 and grave-goods from Cremation 955.

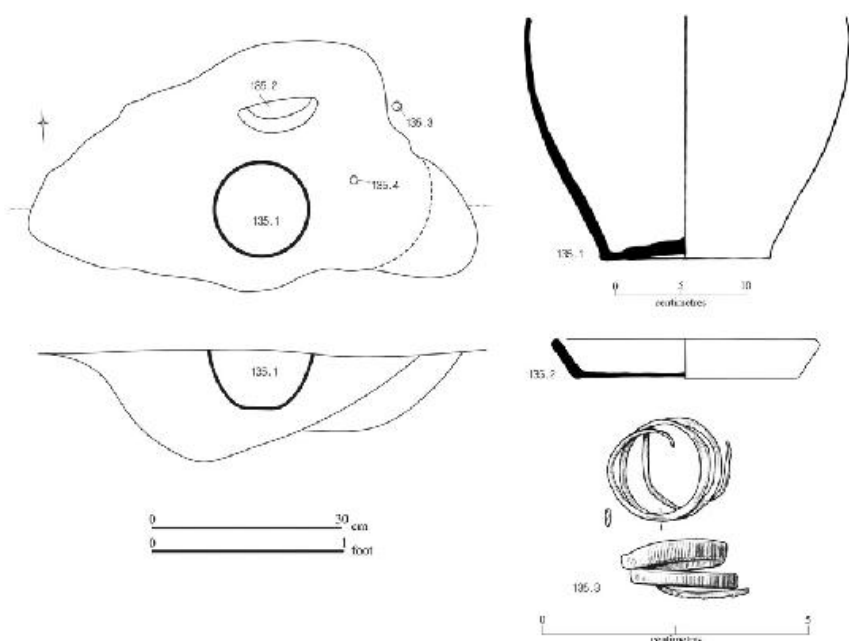


Figure 4.88. Plan, section and grave-goods from Cremation 135.

The cremated remains were generally placed inside a large grey ware storage jar; accessory vessels were either placed within the urn (Cremations 80, 82–4 & 132) or alongside in the burial pit (Cremation 135). Other accompanying objects comprised the fingerring in Cremation 84 and the finger-ring and disc brooch in Cremation 135.

The Northern Group

The four cremations in this group are probably of comparable date: the best dating assemblage comes from the casket burial, Cremation 1028, and is of the early to mid second century AD. It is interesting that nearby Cremations 1001, 1002 and 1009 all produced substantial nail assemblages. These would seem to represent cremations placed in small plain nailed boxes; their clustering at the north end of the site,

outside of the main Romano-British settlement area, suggests a restricted burial practice. The identification of two of these interments as young children is particularly significant, given that many of the other younger burials at Mucking either accompany adults in cremations or are found on their own in inhumations.

Cremation 1001. (1497N/845E) Adult (Fig. 4.90)

NB 255.72–3

Grave pit: Roughly oval in shape, with an irregular profile, measuring $0.88 \times 0.62 \times 0.2$ m deep.

Pit fill: Mixed, light brown-greyish, sandy loam, with occasional patches of charcoal.

Finds in fill: Sherds of ?grass-tempered pottery; small glass fragment, greenish metal with bubbles, with an opaque whitish surface.

Grave furniture: Fragments of 35 nails were found in the grave fill. These probably derive from a badly disturbed box or casket burial.

Bone: Poor preservation; complete burning; white in colour; traces only. There was a distinct concentration of bone and charcoal at one side of the grave pit (see plan).

Cremation 1002. (1482N/847E) Child (1–7) (Fig. 4.90)

NB 255.74–5

Grave pit: Sub-rectangular, with a slight extension to one side, measuring $1.19 \times 0.82 \times 0.21$ m deep. Badly disturbed by animal burrowing.

Pit fill: Light–medium brown loam with charcoally patch in the centre.

Finds in fill: Abraded sherds (number unspecified) of flint-gritted pottery (probably prehistoric), also pieces of ?cinder (bone?), a piece of copper alloy, and a fragment of a ?bead noted.



Figure 4.89. Plan of the northern group of isolated burials.

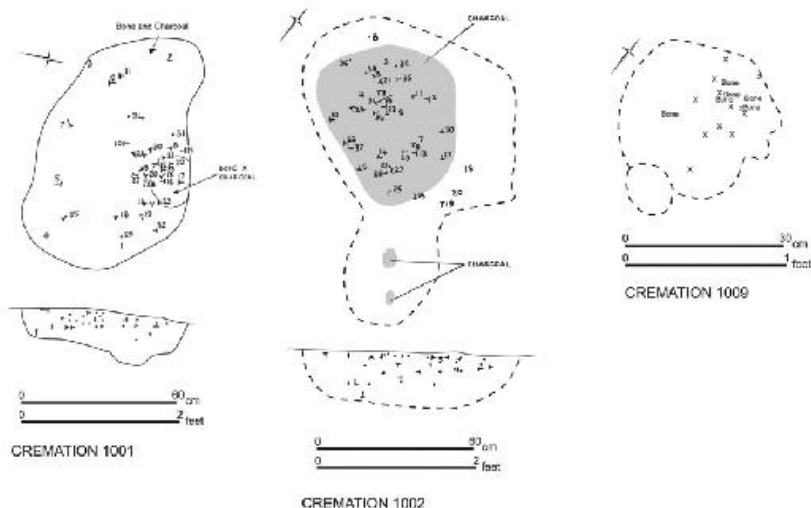


Figure 4.90. Plans and sections of Cremations 1001 and 1002, and plan of Cremation 1009.

Grave furniture: A total of 38 nails of varying sizes recovered from the fill. These, like Cremation 1001, probably represent pieces of a box or casket, again, badly disturbed by animals.

Grave-goods: No data.

Bone: Poor preservation; complete burning; white/black in colour; 45g; Max L. 7mm.

Cremation 1009. (1503N/783E) Child (1-7) (Fig. 4.90)

NB 254.72, 102

Grave pit: Irregular oval, measuring 0.31×0.31 m wide, partially disturbed by animals.

Pit fill: Mottled, charcoal-flecked and hard-packed with lenses of orange gravel, and dark stains.

Finds in fill: None recorded.

Grave furniture: Twelve nails; three complete, nine fragments with heads, presumably from a box or casket.

Grave-goods: No data.

Bone: Poor preservation; complete burning; white in colour; 7g; Max L. 19mm.

Cremation 1028. (1655N/758E) (a) Adult (b) Child (7-14) (Fig. 4.91)

NB 269.25; 268.112-13

Grave pit: Straight-sided oval c. $1.07 \times$ c. $0.69 \times <0.13$ m deep. Cut into southern ditch of the North Enclosure.

Pit fill: Black brown ?old topsoil fill, with five accessory vessels surrounding a cremation deposit probably once contained within a

casket, represented by fittings 1028.6–8 (see below).

Finds in fill: A residual small worked flint was found within the fill.

Grave-goods:

1028.1 Beaker in GFN fabric. Decorated with bands of rouletting; plain band then a band of lattice. The rim and top third of the vessel is missing (Base 60mm). Mucking product (ML09). AD 60/70–90/100.

1028.2 Dish in GRY fabric (Rim 135mm; Ht 45mm; Base 40mm; EVE 0.85). Mucking product (PG01). AD 50/60–80/90.

1028.3 Jar in GRY fabric. Rim and top quarter of the vessel are missing (Base 60mm). AD 110/20–200+.

1028.4 Poppyhead beaker in GFN fabric (Rim 70mm; Ht 120mm; Base 37mm; EVE 0.94). Similar to Marsh and Tyers 111.F.4; similar examples in north Kent (NM06). AD 100–160.

1028.5 Dish in GRY fabric (Rim 135mm; Ht 45mm; Base 42mm; EVE 0.9). Mucking product (PG01). AD 50/60–80/90.

1028.6 Several pieces of a copper alloy plate (one pierced), possibly from a bronze lock-plate, and one complete hollow-domed rivet/stud (Diam. 11mm) attached to a large piece of wood; the plate fragmented when lifted and was found lying on top of wood fragments. One fragment is rectangular, preserving one end and measuring 11mm wide, and may be part of the backing-strip described below (1028.8c). A further fragmentary hollow-domed stud (Diam. 11mm) was also recovered in addition to a smaller rivet or stud (Diam. c. 7mm). The general design of the rivets and plate are similar to that recovered from Burial XXX at Skeleton Green (Partridge 1981, 305) and the pre-Flavian burial group 21, Folly Lane, Verulamium (Niblett 1999, fig. 90).

1028.7 A small square-sectioned copper alloy nail/tack (L. 12mm) with a flat circular head and flanged collar was retrieved with 1028.6, along with the shanks of a copper alloy (L. 7mm) and two iron nails/tacks (L. 10 and 18mm). 1028.8a Bronze ring (previously identified as attached to iron shank; a corroded curved object c. 10mm was examined with the ring). The outer surface has clearly defined fluting. Dimensions: external Diam. c. 28mm, internal Diam. c. 22mm, Th. 4mm, W. 5mm, Wt 7g. Similar rings have been found at Camerton, Colchester and Richborough. The ring handles from Richborough were part of a wooden casket, whilst an example from Colchester was associated with an iron split-spike (Jackson 1990, 48, cat. 140–1, pl. 14), with the rings and split-spikes from Grave 4, Skeleton Green, also very similar in design and shape (Partridge 1981, 315). The ring was found with three small fragments of copper alloy sheet.

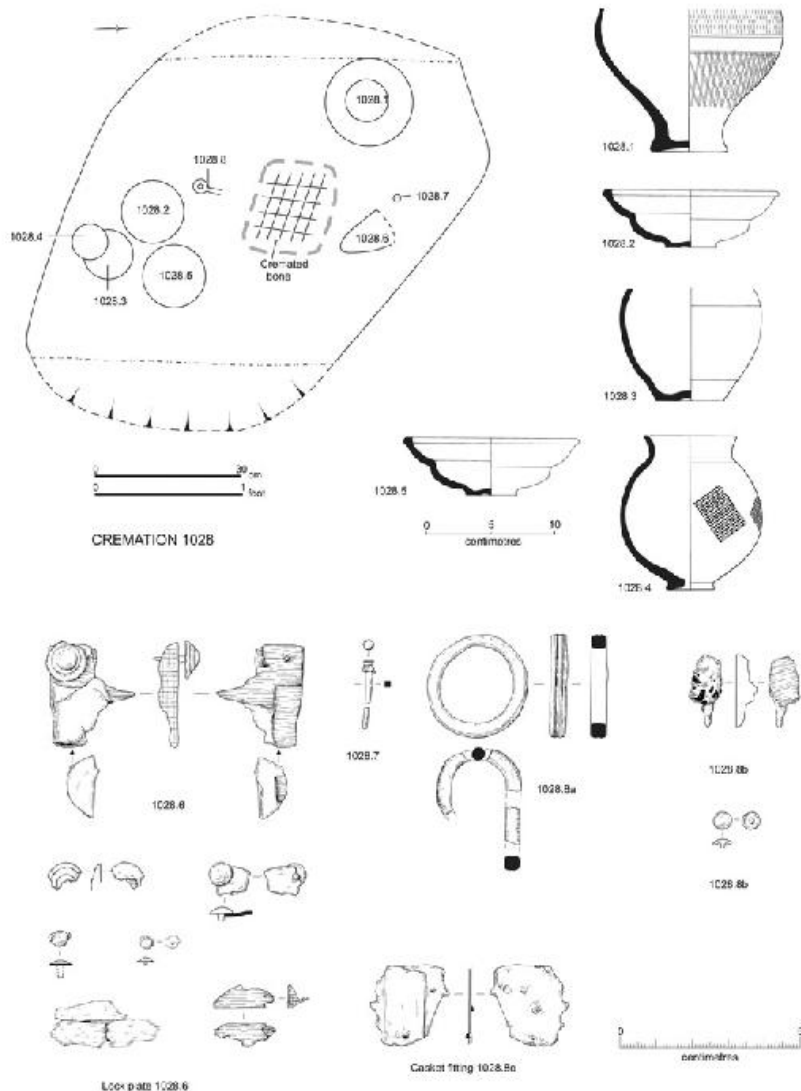


Figure 4.91. Plan and grave-goods from Cremation 1028.

1028.8b Very small copper alloy domed stud (missing its shank), diameter c. 5mm, and several small pieces of copper alloy sheeting measuring between <1mm and c. 10mm. Found in association with possibly highly burnt maxilla from a child and fragment(s) of vitrified or broken glass adhering to a piece of wood; several pieces of wood (one possibly preserving a worked edge) were also recovered. 1028.8c Very fragmentary pieces of riveted copper alloy sheet, measuring c. 2–22mm long and approximately 1mm thick. The largest piece measures

c. 22 × 22mm and is riveted to a narrow rectangular backing-strip 11mm wide. A small domed stud or rivet was also found similar to that described above, with slightly more of the shank preserved. *Bone*: (a) Poor preservation; complete burning; white/black; 20g; max L. 16mm (b) Poor preservation; complete burning; white; 150g; max L. 41mm. The concentration of cremated bone within the pit appears to have been fairly contained, suggesting that it was buried inside a casket.

Discussion – Rites and Practices

The excavations at Mucking revealed a remarkably complete Roman rural settlement, with five associated cemetery areas and a number of more dispersed burial groups. The cemetery areas were enclosed by or aligned on ditches, often pre-existing enclosures, and their general contemporaneity may indicate that they were the burial grounds of family or other social groupings (Fig. 4.92). This chapter has detailed these individual cemetery areas, and highlighted their similarities and differences.

Cemetery I, lying in an Iron Age enclosure at the far southwest of the site, to the west of the RBI enclosure, has two distinct phases of burial: a later first- to early second-century group of 10 urned cremations, with a subsequent inhumation cemetery of 64 graves in use until the fourth century. The latter predominantly consisted of accompanied coffined burials (gravegoods comprising mainly hobnailed boots or sandals, bracelets and accessory vessels); their orientation was variable, and some intercutting of graves may represent the areas of family or household plots.

Cemetery II lay within a sub-enclosure of the Central Enclosure that probably represents the main settlement enclosure: this comprised 14 cremations

and 11 inhumations, along with a remarkable *epula* deposit of the later second century: the remnants of a ritual meal, with up to 10 place settings represented by lamps, platters, *tazze*, beakers and coins. Several of the cremations in Cemetery II were within wooden caskets or boxes, along with accessory vessels and other grave-goods generally of mid first- to later second- or early third-century date. The inhumations were more varied: ranging in date from the mid second to the later third century, the adult burials were generally confined with, at most, a single pottery vessel, whereas children displayed a greater range of containment and furnishing.

Cemetery III also lay within a probably preexisting enclosure, immediately to the northeast of the Central Enclosure; it comprised 10 cremations and 14 inhumations. Cremations here, again, were generally later first- to later second-century in date (accessory vessels often being placed inside the main cremation urn, with no evidence of wooden caskets). Some of the inhumations were confined, but these are otherwise unfurnished and, therefore, difficult to date; they are assumed to be contemporary.

Cemetery IV lay at the edge of excavation, to the southwest of the Central Enclosure. This contained 17 cremations and a fourth-century gypsum burial in a stone coffin. The cremations were, however, earlier in date at mid second- to early third-century. An interesting practice seen here was the use of inverted platters as lids for cremation vessels, with other accessory vessels placed inside.

With nine inhumations and three apparently associated cremation burials, Cemetery V, dated to the

Conquest period and afterwards, was aligned on a remnant Iron Age enclosure.

In addition, there were a substantial number of apparently isolated burials or small clusters of cremations (a total of 13 cremations and one inhumation). These occurred singly or in groups of two or three, and included urned cremations, as well as casket and box burials. The most favoured location for the digging of these burials was either in ditches, usually at the corners of fields and enclosures, or aligned beside such features. The majority of Romano-British burials at Mucking were made before the middle of the third century. One of the burials that definitely post-dates this is also one of the most elaborate: the plaster burial within the stone coffin in Cemetery IV, which dates to the later fourth century AD.

Taken together, the burial sequence at Mucking exhibits some features worthy of further overview and discussion: the use of footwear in both inhumation and cremation burials; patterns of pottery deposition; the deployment of personal ornaments, and coffin-, box- and casket-use. Accordingly, these are considered below.

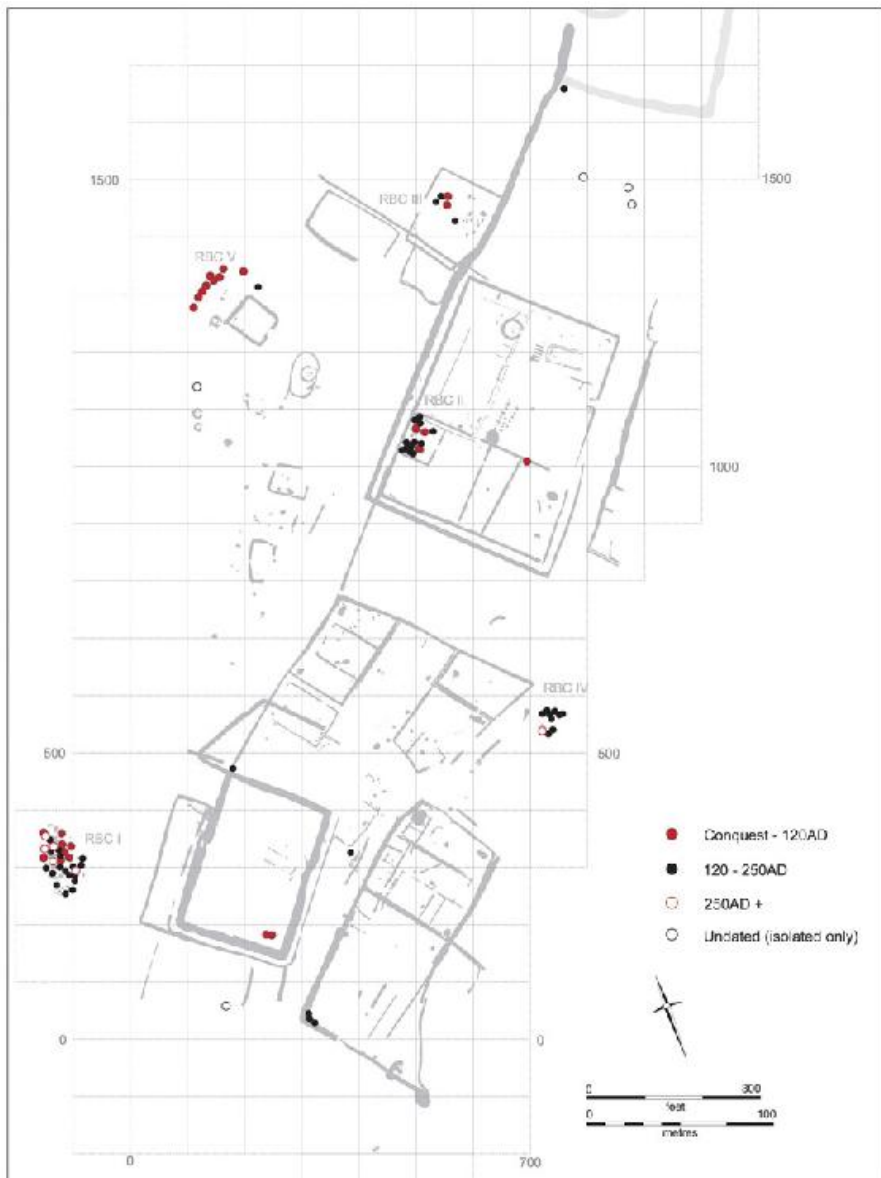


Figure 4.92. Location of dated burials across the site.

Table 4.15. Truncated storage jars in the Mucking cemeteries.

Cemetery I	Cemetery II	Cemetery III	Cemetery IV	Isolated
42.1	891.1	1031.1	1070.1?	80
	892.1	1034.1	1074.4?	81
	893.1	1035.1	1073.1	82
	894.1	1038.1	1074.3	83.2
	899.8		1076.1	84.1
			1075.1	86.1
			1080.1	135.1
			1082.1	
			1084.1	

Nailed Footwear – Overview (Quita Mould)

Iron hobnails were found in 27 Romano-British inhumation burials in Cemetery I and within two cremations in Cemetery II. In addition, it is recorded that hobnails came from Cremation 587, in Cemetery V, but no further details have come to light. The occurrence of visible footwear in Romano-British burials has been comprehensively reviewed by Philpott (1991, 165–75). It is worth restating the point here that the presence of hobnails in burials principally reflects one type of footwear: shoes of nailed construction, the most common type. To a much lesser extent hobnails may reflect a small number of other shoe types, as nailing also occurs occasionally as reinforcement on the soles of some sandals and shoes of stitched construction. Shoes of other constructions usually leave no trace in the archaeological record, though they may be found under exceptional burial conditions. Recently, the burial of a woman wearing corksoled slippers and a child wearing stitched shoes were found together in a stone coffin dated to AD 200–50 at Boscombe Down, Wiltshire, for example (Mould 2007). At Mucking, as elsewhere, the burials without hobnails did not contain nailed shoes but may have contained other types of footwear, which have left no archaeological evidence.

Pottery Use and Deposition (Rosemary Jefferies)

With a few exceptions, and excluding the samian (commented on previously in [Chap. 3](#)), the pottery from the Mucking cemeteries is not very noteworthy. Most of the forms were made at Mucking or in north Kent, and there is evidence that seconds were used as grave-goods. In Cemetery I, the 10.1 vessel was a second, damaged by an indentation and 29.1 is similar. In both cases the damage caused spalling and holes in the pots. In Cemetery II, the high-shouldered jar 903.5 is another example of a kiln waster, where the surface has been damaged by spalling. There are other examples in the cemeteries of

seconds. Cemetery IV had a total of 23 vessels, seven of which were seconds. Cremation 1071 had six vessels, four of which were seconds, and 1075, 1076 and 1078 also had seconds. The use of seconds is by no means unusual. At the Eastern Cemetery, London (Barber and Bowsher 2000) cremations CB785 and CB 235 had jars that were seconds. These forms occur at both Mucking and in north Kent. At Skeleton Green (Partridge 1981) seconds were also used in the cemetery. At Mucking not all seconds were from local kilns. In Cemetery I the colour coat beaker 3.1 has a warped base and the pot is reddened on one side, damaged during firing, while the colour coat beaker 14.1 also has a warped rim, indicating a second. Both of these vessels are in the date range AD 230/50+ and may post-date pottery production in the Thames Estuary. A poppyhead beaker from Cemetery II, 885.1, is also a kiln waster, with evidence of differential firing.

The average number of vessels per burial might give an indication of status. However, at Mucking, where pottery production was part of the economy, seconds would have been readily available for use in the cemeteries and may account for the presence of several vessels in burials. Thus, the number of vessels included may not always have been indicative of status, but instead might simply have been linked to availability of pottery.

At Mucking a number of truncated storage jars have been used in the cemeteries. It is not always clear whether these were damaged post-deposition or were truncated prior to burial. A comparison with other cemeteries, both urban and rural, shows that the use of truncated storage jars was common practice in the first and second centuries (Table 4.15).

It might be argued that some vessels could have been damaged by ploughing. However, the distribution of the pots suggests the deliberate use of discarded storage jars. How does this compare with other cemeteries? Caerleon Lodge Hill cemetery (Evans and Maynard 1997) has several examples of truncated vessels, all associated with cremations. The western, Atlantic House Cemetery of London saw truncated vessels associated with Cremations 24, 34, 35, 43/44 and 47 (Watson 2003). Four of these vessels were Thames Estuary products. There are also a similar number of vessels from the Eastern Cemetery (Barber and Bowsher 2000), but it is unclear whether these vessels were re-used or were seconds.

Personal Ornaments

The use of brooches and bracelets/bangles at Mucking was mutually

exclusive. Brooches only accompanied cremation burials (all of which were adult where known) dating probably to before AD 200. Bangles and bracelets, on the other hand, were only found in inhumation burials. The seven burials with such ornaments in Cemetery I were all adults (where known), while the two from Cemetery II were both of children. Other personal ornaments were extremely rare: just a finger-ring alongside the brooch in Cremation 135 and another in Cremation 84. This low level of furnishing, of the inhumations in particular, emphasises the relative poverty of the burial rite here. No glass vessels, toilet implements, tools, necklaces, ear-rings or brooches were recovered from the inhumations of Cemetery I, items which are all common from other (apparently more wealthy) contemporary sites (*cf.* Barber and Bowsher 2000).

The inclusion of bracelets as grave-goods (whether on the body, or buried separately) is also important chronologically. At the Atlantic House, Western Cemetery in London (Watson 2003), which went out of use in the mid to late third century, there were no bracelets, earrings, finger-rings or brooches, and it was suggested that the presence of these grave-goods might indicate fourth-century practices. However, at the Radley Barrow Hills site, aside from some shale bracelets with child burials, there were very few grave-goods found with the fourth-century burials (Chambers and McAdam 2007, 30), and at Pepper Hill, Southfleet, personal ornaments were predominantly found with early and mid Roman inhumations, although the single burial with bracelets buried apart from the body was noted as unusual in an early third-century context, as this is a feature seen predominantly in fourth-century burials in Britain (Booth and Cool 2006).

Bracelets at Mucking were found in Cemetery I, in Graves 6, 15b, 18, 30, 52 and 74, as well as in Grave 895 in Cemetery II and in Grave 659 in Cemetery V. Worn snakes-head bracelets were found in Graves 6 and 18 and a worn expanding anklet(?) in Grave 18; there were unworn multiple-motif bracelets found in Graves 30 and 15b (though original location is uncertain, as this grave was disturbed), unworn bracelets with distinctive decorated terminals in Grave 52, a cable-twist bracelet inside the coffin of Grave 74 (it is unclear whether this was worn or not), two probably worn plain bracelets in Grave 895 and a plain bangle in Grave 659. The standard bracelet chronology allows for the snakes-head, cable-twist and plain bracelets to be of second- or third-century date, which accords with the bulk of the phased burials within these cemeteries (although Grave 659 probably dates to the first century AD), and with the dating of the pottery vessel in Grave 74. Multiple-motif burials are, however, typically assigned a fourth-century date, particularly late fourth-century (Swift 2000, 19;

Crummy 2006), as are the bracelets with distinctive terminals like that in Grave 52 (E. Swift pers. comm.). This contradicts the second- to third-century dating of the dish in Grave 52, under which one of the bracelets was found. Either the dish was old when buried, or this collection of bracelets belonged to a period earlier than is usually thought. A later fourth-century dating would make Graves 30 and 52 the latest burials in Cemetery I, while Grave 15b was cut through by Grave 15a (a coffined and hobnail burial, which bears many similarities with the second- and third-century burials in Cemetery I).

Most of the dated bracelet contexts come from later Roman urban sites. We should be wary, however, of inferring too much from urban cemeteries in London and elsewhere, when interpreting practices from rural sites. Keegan (2002) has demonstrated how different, for example, the Lankhills cemetery was compared with contemporary sites, with subtle differences between apparently uniform practices, especially with regard to structuring by gender. At Lankhills grave furnishing continued, whereas it largely died out in the mid third century at other sites used in Keegan's study. The Lankhills artefacts were closely linked to both the sex and age of the deceased, and there was clear sex-based demarcation of burial areas, which could potentially be a result of Christian burial practice. On balance, we have dated these bracelet burials to the later phase of burial at Mucking, but not as late as the later fourth century.

Contexts of Burial

If they were not particularly well furnished, Mucking's dead were at least well enclosed. Coffin-use for inhumations was the majority rite, and cremations too appear to have sometimes employed simple nailed boxes or, very occasionally, more elaborate caskets. Wooden coffins were in use from the later first century (as seen in Graves 64 & 652), and remained in use until the last burials in Cemetery I. The two casket burials on the site (Cremations 903 & 1028) are both mid to later second-century in date, while the definite and probable box burials have a wider date range, from the later first to the early third century.

Otherwise, what does the well-documented patterning – and sheer variety – of burial practice at Mucking represent? What lies behind the decision to bury one person within a defined cemetery area, and another in the corner of an enclosure; to inhume one person and cremate another; to elaborately furnish a grave or not? One very obvious contrast that can be drawn between Mucking and many of the other well-published Roman cemeteries is its apparent lack of organisation and uniformity. This is obviously a chronological feature: organised (or 'managed') cemeteries of the fourth century such as

Lankhills tend to have consistent patterns of grave furnishing and orientation (Philpott 1993b; Booth *et al.* 2010). These do not exist to any great extent at Mucking, and the overwhelming impression is of burial practices that were individualised to suit the person being buried, presumably with family members – rather than semi-professional undertakers – controlling the rites. It is unfortunate that the bone preservation of the inhumations was so poor: being able to examine the correlation of rites such as coffined, furnished and hobnailed burial against the age and sex of the person interred would undoubtedly have revealed significant patterning. The size of body stains and coffins has been used here to a certain extent (with provisos), and has revealed a trend for younger individuals (but not just young infants) to have inhumation as well as cremation as burial alternatives in the first and second centuries (e.g. Cemetery V). Several of these younger burials were also elaborately furnished, marking them out as different within their cemetery contexts: Grave 899 in Cemetery II, with its eleven accessory vessels, for example.

What of the relative status of the people being buried at Mucking? There are obvious differences between contemporary cemetery areas in terms of the provisioning with grave-goods: Cemetery II stands out here, but Cemetery IV is also relatively well furnished. It must be significant that Cemetery II was located at the heart of the settlement, in a contemporary enclosure (rather than reusing earlier enclosures as was the case for Cemeteries I and III, or aligned alongside one like Cemetery V). Other indicators of relative social position can also be assessed: cremation itself may be seen as a more ‘expensive’ burial rite than inhumation (both due to the technological knowledge evidenced by the completeness of cremation in evidence, but also due to the fuel needed for the pyre), while the amount of cremated bone collected from the pyre (and its cleanliness) can also shed light on the investment of time in the subsequent burial. On average, Cemetery I produced smaller amounts of cremated bone per burial than the other cemeteries; Cemeteries II, III and IV were remarkably consistent in the average amount of bone per cremation – at 532g, 585g and 679g, respectively – although each displays a large range within the cemetery itself (Cemetery I was lower at 475g on average, and may reflect a chronological pattern, as this was the earliest cremation group). There may not always be an obvious relationship, however: the apparently ‘high status’ casket burial Cremation 903 in Cemetery II produced only 15g of cremated bone. Certainly, later Iron Age high status cremation practices did not seem to require full collection of the cremated remains (*cf.* Crummy *et al.* 2007, 433), and aspects of this attitude may have continued.

With the exception of the stone coffin burial, Grave 1086a, which was clearly a late insertion into Cemetery IV, it is Cemetery I that appears to both start earliest and finish latest within the Romano-British sequence. However, there are dating issues that need to be considered when attempting to date any burial here, particularly the apparent chronological difference between the date of pottery vessels within a particular grave or cremation.

There are other sites where specific vessels used as grave-goods appear to have been old when buried, such as at Brougham in Cumbria, where some of the cremation vessels appear to be second-century vessels used in third-century cremations (Cool 2004, 351–2); there are also hints from this site that the age of the person buried governed what was appropriate to include in the grave. Similarly, old samian vessels were used in the cemetery at Wallington Road, Baldock (Burleigh and Fitzpatrick-Matthews 2010, 32, 203). Baldock also saw the use of seconds and/or wasters as cremation urns, and some vessels with rims and necks deliberately trimmed down to shoulder height (*ibid.*, 204). One good example comes from the East London cemetery (Barber and Bowsher 2000, 122), where a Koln beaker of AD 100–140 was buried with a late BB1 jar of AD 250–400. There are also plentiful examples from the Romano-British cemetery at Pepper Hill in Kent, in all phases (Biddulph 2006, table 16) and at Broughton in Buckinghamshire (Atkins *et al.* 2014, 242–3).

The excavations of Romano-British cemeteries and burials at Mucking are clearly products of their time (albeit largely well-excavated and recorded products), and it may be instructive to consider what information may be missing because of this. Modern analysis of cremations would have distinguished more carefully grave-goods from pyre-goods, the cremated bone would have been more carefully and systematically analysed, and we could expect better assessments of age, sex, pathology and the presence of animal bone (see e.g. Pearce 2002). Cool (2011, 301–2) has highlighted the extent to which Romano-British burial practice – both cremation and inhumation – was structured by age and sex, and more detailed osteology at Mucking would have added far more detail to the interpretations than we have been able to offer here. Similarly, although the inhumations saw their bone very poorly preserved, there might have been instances where collagen was sufficiently preserved in bones or teeth to allow the use of DNA or stable isotope analysis, allowing for an analysis of place of childhood origin, diet and potentially family relationships, as has been so profitably demonstrated at York, Gloucester and Catterick (Leach *et al.* 2009, 2010; Chenery *et al.* 2010, 2011; Muldner *et al.* 2011).

What remains to be addressed when considering the site's many Romano-British cemeteries is the degree to which they may reflect their respectively adjacent sub-settlement 'parts'. Particularly relevant in the case of Cemetery II and the Central Enclosure, this we will leave for the final chapter.

Integrating Parts – Settlement and Cemeteries

This final chapter will consider various aspects of Mucking's Romano-British settlement, attempting to set the finds and cemetery data more in context, and integrate them with the structural sequence in order to assess the site's social significance. From the outset, though, it should be stressed that Mucking's sequence singularly reflects upon the nature of *transitions* – Late Iron Age to Roman to Anglo-Saxon – the role of 'outside'/introduced influence and its impact on material culture assemblages. Accordingly, issues relating to processes of *acculturation* are crucial here.

While this might risk overstating the importance of Roman Mucking, we should not forget the extent of its connections, as the settlement clearly had access to long-distance goods. Aside from its Gaulish samian (plus pieces from Trier and a rare Rheinzabern ware vessel), this includes its North African and Spanish amphorae and Koln beakers. Apart perhaps from the dolphin, lions and panthers depicted on the site's

samian, its most remarkable ‘exotica’ would have to be the charred date stones accompanying Cremation 911 – the possible *epula* deposit – as it is this, more than anything else, that speaks of distant connections. In the site’s later phase, imports such as *céramique à l’éponge* and Mayen wares feature in how its Roman/Anglo-Saxon transition is envisaged.

At Mucking, we see a multi-component settlement with five associated cemeteries. In short, *a complex*, whose many parts reflect on many issues. There will not, therefore, be any single over-arching explanation offered, as substantive settlements were/are never just one ‘thing’. Although we may risk contradiction here, when viewed in the light of Mucking’s longterm sequence (Figs. 1.6–7), it was only in the Romano-British period that the terrace’s land-use and ‘settlement parts’ were unified within a single coherent *system*.

Transitions (I) - Iron Age/Roman

In the chapter outlining the site’s sequence and structural remains (Chap. 2), it was argued that Mucking saw continuous occupation from the later Iron Age. This is reflected in a number of aspects: the continuity (with remodelling) in its enclosure systems; the continuing use of the roundhouse-type structure (alongside other rectangular and more ‘Romanised’ forms) and, perhaps, the development of the later Iron Age pottery production into the later first century AD and beyond (Fig. 5.1). The finds evidence supports this argument (Chapter Three). Dateable artefact types, such as coins and brooches, see unbroken

sequences through the first century AD, while the mass of pottery data strongly suggests an indigenous industry that developed new forms and fabrics, but operated very much within an existing technological and social framework.

Arguably the foremost expression of this Iron Age/Roman continuity was the arrangement of *The Plaza*, with the Central Enclosure's fenced plot laid out in relationship to the preceding square barrow arrays; thereafter, this was clearly maintained as some manner of 'reserved ground' (see [Figs. 1.9 & 5.16](#)). Another basis of continuity is demonstrated in this complex's main subsistence components: the mass-scale of 'Granary Row's grain storage – surely, in part, intended for export – effectively repeated in Roman Structure 8's granary.

Drury and Rodwell (1980, 64) argued for the creation of a planned landscape in the Thurrock area in the very Early Roman period, which incorporated elements of the pre-Roman landscape, but which was emphatically not centuriated ([Fig. 5.2](#)). Rodwell (1978) even suggested that this area, along with a similarly laid-out enclosure pattern in the Dengie peninsula, might have been an Imperial Estate. This proposition was supported by the apparent absence of villas in these areas, and the concentration of the Early Roman salt-making industry along their coastlines (Drury & Rodwell 1980, 64). The presence of Early Roman military metalwork at Mucking, together with the layout of the 'paramilitary' enclosure RBI ([Fig. 5.2.1](#)), plus 'a specifically military type of granary' (*ibid.*, 65) were the factors marshalled in support of Mucking being an early supply base for

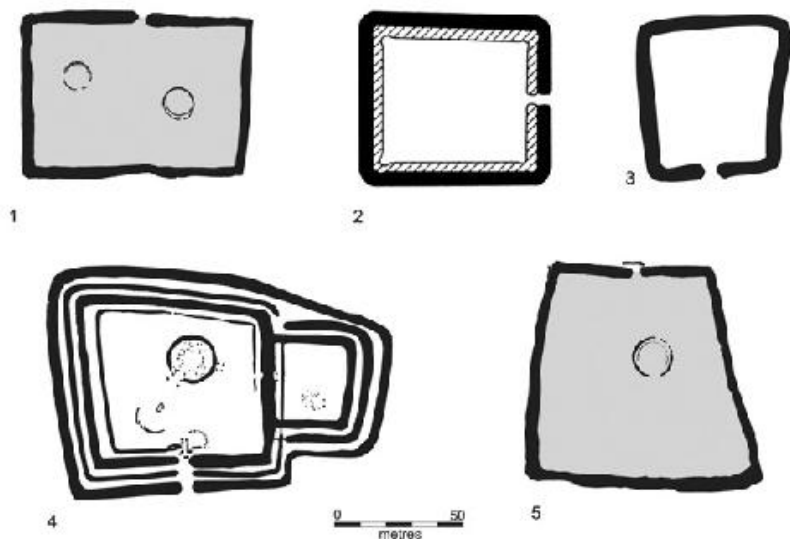
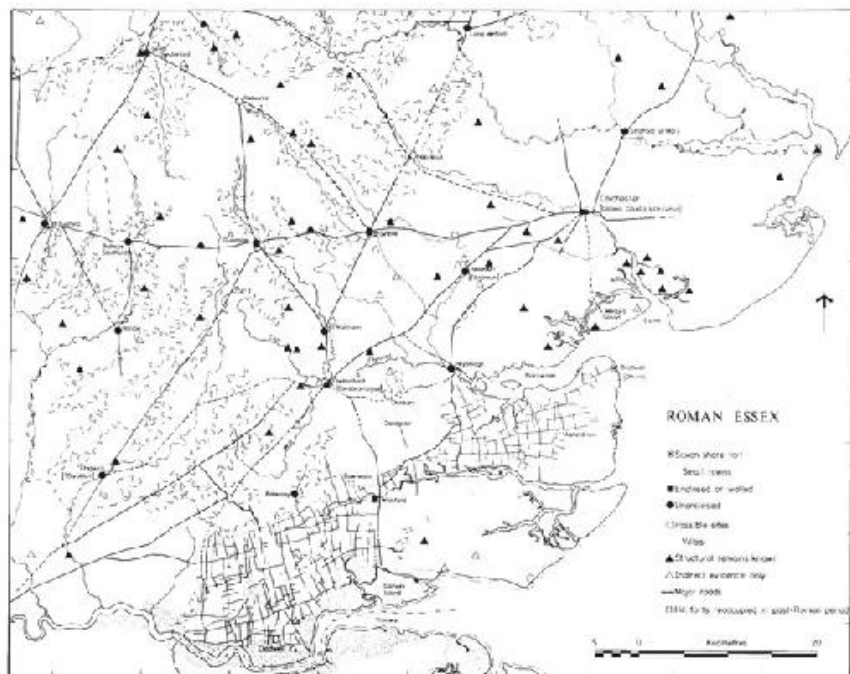


Figure 5.2. Drury and Rodwell's Roman Essex map (1980, fig. 22; top); below, comparative enclosures (with Mucking's greytoned): 1) RBI; 2) Thornham (Gregory & Gurney 1986); Gun Hill (Drury & Rodwell 1973, fig. 2); 4) Orsett 'Cock' (Carter 1998); 5) North Enclosure (see *Prehistory Vol.*, fig. 5.31 for further examples).

As outlined in this volume's introductory chapter,

even during the excavations a possible Early Roman military involvement at Mucking was posited. This was particularly prompted by the plan of the RBI enclosure, which Margaret Jones termed ‘paramilitary’ (i.e. ‘not quite military’). In an early interim publication she reported that a first-century AD legionary’s ‘sporrán’ pendant had been recovered from the interior of RBI (Jones 1973a, 11). This appears to be Cu105, now identified as a heart-shaped horse harness pendant, with parallels from Saalburg, Germany and Caerleon (Appleby, [Chap. 3](#)), and is indeed of probable military attribution. Other military or ‘official’ copper alloy artefacts from the site’s Romano-British contexts comprise a fragmentary seal-box (plus a possible fragment of another), a probable piece of scale-armour, a cuirass fitting and a possible shield-binding. Within the ironwork, projectile points, ferrules and armour buckles hint at some military involvement, although numbers are small ([Fig. 5.3](#)). Overall, the metalwork assemblage is generally typical of a rural site, albeit with hints of commercial activity and possibly short-lived military connections.

The site’s coin profile might, however, also support such a military involvement. As discussed by Reece ([Chap. 3](#)), its totality most resembles the profiles from the military sites such as Maryport, Caerleon and Chester while with the ‘Anglo-Saxon context’ coins removed, it bears a close resemblance to Ribchester and London Guildhall Museum (Reece 1995, fig. 6). The brooch profile too displays some oddities, as in its above-average numbers of penannular brooches, Mucking resembles Fison Way in Norfolk and the Colchester colonia, but it lacks the latter’s numbers of

Hod Hill and Plate brooches, both popular with the military (Haselgrove, [Chap. 3](#)). The site's samian, however, comprises a relatively small amount from the mid to later first century (Bird & Dickinson, [Chap. 3](#)), but it does display the mid-Antonine peak seen elsewhere, suggesting that first-century occupation at Mucking was on a small-scale relative to its later development (see, though, [Chapter 3](#)'s discussion of the Well 4 assemblage).

While the finds assemblages might, therefore, support the suggestion of some military involvement, at least in part, Margaret Jones does appear to have been wrong about the role of the RBI enclosure. The original dating was simply too late, with pottery from its primary fills now identified as Middle Iron Age, and this is supported by the brooch and coin evidence from its upper fills (see *Prehistory Vol.*, chaps. 3 & 4). Moreover, in the last 30 years this enclosure type has become more widely recognised, both through aerial photography (and the work of the Essex Mapping Project; Ingle & Saunders 2011) and by excavation, and is now firmly held to be an Iron Age form.

In some ways, the nature of the RBI enclosure resembles that excavated at Thornham, Norfolk (Fig. 5.2.2; Gregory & Gurney 1986). It measured approximately 75m by 55m internally, while Thornham was 75 x 60m, with an internal rampart enclosing an area of 50 x 36m. The latter was interpreted as a native defensive enclosure post-dating the Roman invasion of AD 43, but pre-dating the Boudiccan revolt (*ibid.*, 13). This, though, this was based on old and partial excavation records, and on minimal finds data. Similar ditched enclosures at

Warham Burrows and Wighton (both Norfolk) were dated to the pre-Conquest period on more robust evidence (*ibid.*, 20 & 31). All lay on relatively high ground, overlooking a valley or the sea, but with entrances facing in the opposite direction (*ibid.*, 33–4); one possible explanation of them is that they had a religious function (*ibid.*, 35). Intriguingly, RBI at Mucking exactly matches this landscape location: overlooking the Thames Estuary, with its entrance facing away to the west. Although the enclosure itself is much larger, the pottery sequence of the Inner Enclosure at Burgh in Suffolk also resembles that seen at Mucking, with initial fills containing handmade Iron Age wares, rapidly followed by ‘Belgic’ and first-century AD Roman products (Martin 1988).

Much closer by, Gun Hill’s Enclosure A ([Fig. 5.2.3](#)) also displays similarities with Mucking’s RBI, although its foundation appears to be significantly later in date (Drury & Rodwell 1973). Covering 62 x 50m with a single eastern-facing entrance, its ditches were approximately 5.5m wide and 2.2m deep, with a profile similar to those of RBI, and with ‘late Belgic’ pottery in its lowest fills (*ibid.*, 99). This had seen its internal bank deliberately cast in, halving its former depth and there was so little disturbance thereafter that a turf-line was able to form (*ibid.*, 61). The subsequent earthwork was then used as convenient locations for pottery kilns in the later first century AD, with at least three documented, but more suspected. The grog-, shell- and sand-tempered fabrics associated with Gun Hill’s kilns seem to be best paralleled by the BLA and BLB fabrics at Mucking, and Mucking-type graffiti also occurred there. Like Mucking, the Gun

Hill enclosure had commanding views over the surrounding land, with the ground falling away on three sides, making it a readily defensible position (*ibid.*, 99). As it had to pre-date the pre-Flavian kilns dug into its part-filled ditches, the Gun Hill enclosure was interpreted as dating to the middle of the first century AD and laid out either just before, at, or soon after the Roman Conquest (*ibid.*, 99). Perhaps the Mucking enclosure, first dug in the Middle Iron Age, but then allowed to partially silt up in the intervening years, was the inspiration for the later Gun Hill enclosure? What it was not, however, was a purpose-built later Iron Age fort of any kind; it may have been a Middle Iron Age defended enclosure, but this role had long been superseded by the first century AD.



Figure 5.3. Distributions (I): 'military' and 'official' finds.

Mucking's Roman-period sequence was marked by gradual internal change, with dramatic transformations in its layout and finds assemblages also apparent. One such transformation dates to the later decades of the first century AD (Phase 1), and was primarily marked by the laying out of the Central Enclosure, with its internal structures and divisions. While its position and orientation clearly paid some respect to existing features, together with the establishment of the accompanying Southern Enclosure system, it represents a dramatic remodelling of the settlement, complete with organised water supply in the form of Wells 4 and 6 within it.

This remodelling would certainly not have been a single event and, as presented in [Chapter Two](#), we have sketched the site's Conquest Period layout ([Fig. 2.1](#)). Its distinction essentially rests on the planned qualities of the 'small paddocks' and ditch-lines of the Southern Enclosure-area, that were ancestral to the full realisation of the Central Enclosure. It is to be regretted that this horizon cannot be further nuanced, as when the evidence of the likely continuity of Prehistoric Cemetery V is combined with suggested locations of roads and open spaces, it suggests a quite formal arrangement, whose focus lay in the southern half of the site.

The main Phase 1 remodelling of the site layout appears to go hand in hand with a reorganisation of pottery production at Mucking. It has been assumed that the kilns of the later Iron Age were surfacebuilt and probably located in or near the Western Enclosure-area, where the bulk of their products were

recovered. While a number of the 'Belgo-Roman' kilns of the later first century AD were also located there, others were sited in the Southern Enclosures; there are no apparent differences in the pottery being produced by the two kiln groups, and they seem to have been contemporary. These new kilns were also using a different shell-tempered fabric, which was predominantly being used for the characteristic ledge-rimmed jars. The significance of this pottery production will be explored below; it is though relevant to note that the new settlement layout and the new pottery styles /fabrics appear to coincide.

New kilns occurred in the early second century, again mainly producing pottery in new fabrics – grey wares at this time – although the two earliest such kilns (Kilns 1 & 6) also had evidence for manufacture of the shell-tempered ledge-rimmed jars as previously made by the earlier kilns. This new direction for the pottery production is not dramatically reflected in other aspects of the site layout, save for the virtual abandonment of the Western Enclosures by this time, and by the establishment of a new perimeter around the Central Enclosure, along with replacement structures within it (Fig. 5.1 right). A more marked change comes after the mid second century AD, with the infilling of Wells 4 and 6 (the former with the remains of an apparently high status household assemblage and associated burnt down building). This may coincide with the abandonment of the Central Enclosure for everything other than continued burial in RB Cemetery II, and attests to a major act of enclosure-ground clearance. The pottery production on the site seems to continue, however, with Kilns 2–5

still in use at the end of the second century, and probably into the mid third century. By this point, settlement activity appears to have shifted its focus more to the Southern Enclosure system. What happened after the mid third century will be explored in greater detail below.

The Pottery Industry

It is only fitting that Mucking's pottery production and kilns are reviewed here, given the emphasis on this within its interim publications (e.g. Jones 1972; Jones & Rodwell 1973).

Iron Age/Roman

While Jefferies has reported in detail on the site's Romano-British pottery assemblage (see [Chap. 3](#)), a broader synthesis of the evidence is offered here, as it seems fundamental to the site's interpretation. The excavations produced significant quantities of wheelmade later Iron Age pottery.¹ Some forms that Thompson identifies as 'Belgic', which are found in grog-tempered wares on other sites, are also found at Mucking in shell-tempered fabrics (BLA) and occasionally in the later grey wares. Broadly, it seems as if there was a rather dramatic shift in pottery production, from wares produced in kilns of which no trace survives, to shell-tempered wares fired in the site's 'Belgo-Roman' kilns. In terms of the forms produced, analysis of products by kiln demonstrated that the ledge-rimmed jar – mainly MPX Type AB06 – was the main product of these early kilns (see [Chap. 3](#)), probably from the mid to later first century AD. While these jars were also produced in Kilns 1 and 6 – both in shell-tempered fabrics and in grey wares – examples with the characteristic pre-firing graffiti (see Going, Chap. 3; Jones 1972) are mainly found in and around the early kilns. Importantly, these jars were also produced in grog-tempered fabrics at Mucking (totalling 2.57 EVEs), presumably in kilns predating the 'early' kilns, as the latter have produced no evidence for production in this typically later Iron Age fabric.

The ledge-rimmed jar itself is an Early Roman form (Going G5). Leary has noted that it is the principal jar form on Thames-side sites in the first and second centuries (1995, 97), and Thompson (1982) reported earlier first-century AD examples in grog-tempered fabric;

later examples in grey wares are also common. She also reports grogtempered examples from Hertfordshire, Bedfordshire and Buckinghamshire (*ibid.*). Their production in shell-tempered fabric seems, however, to have been localised. Aside from at Mucking, these shell-tempered ledge-rimmed jars only have evidence for manufacture at nearby Gun Hill (Drury & Rodwell 1973). Examples are known, though, from Grays (Lavender 1998, 28), North Shoebury (Leary 1995, 97), Ardale School (Thompson 1988, 88), Orsett (Rodwell 1987, fig. 6.13) and Aveley (Foreman & Maynard 2002, 140); many of these exhibit the Mucking graffiti, and must have been local products of the Mucking/Gun Hill kilns.

These jars seem, however, to have had a wider regional distribution than might be expected: in shell-tempered fabric they comprise 5% of the pre-Flavian assemblages from Chelmsford, for example (Going 1987, 10), with other examples known from Dunmow and Felsted (*ibid.*, 102), Harlow (Medlycott 2000), Billericay (Rudling 1990), Coggeshall and Rayne, (both with graffiti: Clarke 1988, 60; Smoothy 1989, 16–17), and South Ockendon (with Mucking-style graffiti, possibly grog-tempered; Chaplin & Brooks 1966). It does seem as if the shell-tempered ledgerimmed jar was a specialised product of the Mucking/ Gun Hill area. The graffiti, which have been interpreted as possible batchmarks (see [Chap. 3](#)), certainly suggest that they were intended to contain a commodity of some sort, possibly salt from the nearby production site at Stanford Wharf, where this was a dominant pottery form (Biddulph *et al.* 2012, 99). Biddulph and colleagues argue that its role as a transporter of a specialist product could explain its very limited distribution in south Essex, and general lack of association with other general household wares. Its distinctiveness makes the incidence of this fabric easy to spot; once the Mucking kilns changed to grey ware production, however, the distribution of their products is near impossible to map (*cf.* Going 1987, 108), and it is hard to judge if this regional influence continues through the second century AD.

First and Second–Third Century

Twenty-three kilns were identified at Mucking, which may be divided into groups. Kilns 7 to 23 were little more than pits, with Kilns 7, 8 and 9 being elongated with a small stoke-pit. These are not unlike the so-called Belgic kilns at Goldhanger (Rodwell 1982). The other structures on the site are oval, or irregular pits, often associated with firebars and Belgic bricks. It is difficult to determine whether they were in fact kilns or ovens. These occurred in the so-called ‘Belgic’ area of the site. Where it is possible to identify potential kiln products, these are usually shell-tempered ledge-rimmed jars, fired to a

relatively low temperature and the associated sherds are oxidised.

The role of Mucking's early kilns has been discussed above. It appears that this pottery-making tradition was built on in the second century, with the construction of the larger and more robust Kilns 1–6. While Kilns 1 and 6 appear to have been transitional between the shelltempered production and that of grey ware, Kilns 2–5 produced vessels primarily in the slipped and unslipped grey wares characteristic of the early second century onwards.

The six main kilns were constructed alongside field ditches, although there are suggestions that some were actually constructed within ditches. It is significant to note that the charcoal associated with Mucking's kilns represent typical hedgerow species, particularly elm, field maple, hawthorn, hazel, ash and poplar, with only very little oak. This may provide evidence that pottery production was part of the farming year. The more usual and efficient fuel for kilns was oak. In fact, the absence of good and reliable fuel may have contributed to the decline and abandonment of pottery production on the site.

The site's kiln structures were very similar to those at other sites in south Essex, particularly Orsett and Palmer's Girls' School, Grays. Generally they were constructed in pits lined with clay. The main chamber usually had either a single or a double pedestal, with there also being evidence that kilns were fired without a pedestal.

Mucking's later kilns appear to have been one of the south Essex sources for copies of black burnished wares (MPX Fabric BBT2). A large number of BBT2 bead-rimmed dishes (MPX types RB05 & RB06) were associated with the burnt deposit infilling Well 4; these formed a part of the high status assemblage presumably contained within the burnt down building represented ([Fig. 5.4](#)). Fragments of these dish forms, with the characteristic burnished lattice decoration in the same fabric, are also found in the upper fills of ditch A1A (the Central Enclosure's 'inner' perimeter), but these were not burnt, and presumably represent other accidental breakages. Kiln 1 seems to have produced latticed forms in both BBT2 and BLA3 fabric (transitional Roman fabric), Kiln 6 produced decorated and undecorated slipped grey ware examples, and Kiln 4 only produced them undecorated. A total of 1732 sherds in BBT2 were recovered, 883 of them (51%) from Well 4; the chronology indicates that Mucking's BBT2 pottery thus probably dates to before AD 160/70 (although its production in this fabric could potentially be later; see below). Other sites producing black-burnished type pottery have been recorded at Higham, Kent (Catherall *et al.* 1983) – dating from the mid second to the mid third century, and lying directly across the Thames Estuary from Mucking – New Ash Green and Cooling, also in Kent; Orsett and Billericay in

Essex (Rudling 1990). Monaghan has noted that BB2 forms are generally undecorated after c. AD 180 (1987, 226), perhaps suggesting that at least some of the products of Kilns 4 and 6 belong to the later part of Phase 2.



Figure 5.4. Distributions (II): vessel form AB06 by fabric, against kilns (left); right, pottery fabric BBT2.

The Higham site is particularly interesting, as stratigraphical dating demonstrated an early third-century date for the manufacture and deposition of bead-and-flange dishes in BB2 fabric (those very same dishes assumed by Rodwell to post-date AD 250 at Mucking; Catherall *et al.* 1983, 133–4). Indeed, the only products of the Higham kilns not paralleled at Mucking comprise the Forms IV, VI, and IX (minor groups, each represented by one sherd only); conversely, Mucking products not seen at Higham were Rodwell Types E, H, L, M, O, Q, R, S and T (Jones & Rodwell 1973). These represent either earlier forms only produced in Mucking Kiln 2, or later forms of beaker and storage jar; these may not have been forms produced at Higham. These potteries – within Kent’s Hoo peninsula and the Thurrock area of Essex – thus seem to have been in close contact, sharing typological

affinities (albeit with minor variations) in both the pottery and the kiln structures, and sharing an essentially rural situation (Catherall *et al.* 1983, 134). The kiln types are not, however, of the typical military type seen at Longthorpe and Colchester.

Other probable kilns are also suspected in the vicinity: Barton (1962, 57) reported earlier discoveries of 'a group of Roman Ovens' in the worked out quarries to the west of the main Linford Site. These were surrounded by a ditch, and were reputed to be about six feet square, bottle-necked structures, cut into the gravel, and lined with baked clay. It was also said that they were 'full of pots'. While Barton interpreted these as corn-drying kilns, the similarity of this description with the second-century kilns at Mucking strongly suggests that these were further pottery kilns.

The kilns at Orsett 'Cock' display particularly strong similarities with Mucking's large kilns, perhaps not surprisingly given that the two sites lie just 2.5km apart. All the vessel forms from these Mucking kilns are also seen at Orsett 'Cock', giving support to the idea of a local/regional ceramic tradition in the Thames Estuary-area (Carter 1998, 101). Orsett has also provided evidence for the appearance of flanged rim dishes in the early to mid third century, in accordance with the revised dating suggested for Mucking (*ibid.*). In his initial publication of two kiln groups from Orsett, Rodwell suggested that the close similarities with Mucking implied that the same potters could have been at work (1974, 35). Perhaps more unexpected are the similarities identified between the grey ware Mucking kiln products and the kiln material from Heybridge, dated to the mid third century (Wickenden 1986, 47–50). This might suggest that the Thames-side potteries were part of a larger regional network of pottery production in the second to third centuries AD, perhaps involving some of the same individuals.

Mucking Kiln Products on the Northern Frontiers (Ruth Leary)

It has long been known that BB2 jars, bowls and dishes were supplied to the Antonine Wall forts from Colchester and kilns in the Thames Estuary in the Antonine period and then to the eastern section of Hadrian's Wall until the mid third century (Farrar 1973; Williams 1977; Monaghan 1987; Bidwell & Speak 1994, 226–8). Although Williams found that much of the BB2 he analysed was likely to come from Colchester, and Monaghan defined different BB2 and grey ware fabrics for Colchester, north Kent and Mucking macroscopically, Bidwell did not differentiate sources macroscopically at South Shields.

As early as 1985 it was recognised that grey ware vessels of the type

made at kilns in south Essex and north Kent were reaching the northern frontier (Bidwell 1985, 177–8), when Paul Bidwell recognised jars of Gillam type 151 (1970) as a type made at Mucking (our type AB06) and common at Vindolanda. Neutron activation analysis of the BB2 from Vindolanda by Jerry Evans (in Bidwell 1985, 184, MF2:A3–14) found that it all came from the same source and that the form 151 jar analysed also came from that source. Bidwell considered that it was likely that these jars came from the Mucking kilns, where they are made and from whence the neutron activation, therefore, suggested the BB2 also came. Bidwell identified Form 151 jars at forts on the eastern part of Hadrian's Wall and its hinterland and only as far west as Housesteads and Vindolanda (Fig. 5.5).

Monaghan (1987, 211–3) discussed the northern occurrences of both BB2 vessels and the associated grey ware vessels in his type series for the Upchurch and Thames-side industries of north Kent. The grey ware forms identified by Monaghan on the northern frontier included globular everted rim beakers, his Type 2I, a narrow-necked jar Type 3A, wide-mouthed everted rim jars Type 4A, folded beaker Type 2D1, a lid-seated jar Type 5L (as Form 151 above), the necked everted rim jar Type 3H (as our Type FA and as at Vindolanda), and poppyhead beakers. The earliest occurrence of the north Kent wares in the north identified by Monaghan are on the Antonine Wall in Scotland and these include poppyhead beakers from Mumrills, Newsteads, Traprain Law, a globular everted rim beaker Form 2I and sherds from narrow-necked jar Form 3a from Camelon, an indented beaker from Castlecary, and a carinated beaker sherd at Traprain Law. Of the forms listed by Monaghan from Scotland, only the indented beaker form from Castlecary is a type made at Mucking and Bidwell includes this in his list of BB2 related vessels (1994, 231). This vessel could, of course, be from other kilns in south Essex and north Kent.

Monaghan noted the peak in BB2 importation to Vindolanda c. AD 250 but he dates the forms found to the late second to early third century. He additionally suggests that the BB2 and grey ware types in the North after AD 250 appear to be 'old' (1987, 229), including the wide-mouthed jar (our type HA1), the bead-rim bowls and dishes and everted-rim cooking pots.

Thus there is broad agreement that BB2 from both Colchester and the north Kent and south Essex potteries was carried to the Antonine Wall from c. AD 140–60 and subsequently to Hadrian's Wall until the mid third century at the earliest. In addition to the BB2 range of bowls, dishes and jars, a small number of grey ware beakers including poppyhead beakers, carinated beakers, a narrow-necked jar and a folded beaker arrived on the Antonine Wall and on Hadrian's Wall in the late second or early third century; a narrow-necked jar came from

turret 51B and two widemouthed jars came from turrets 25b and 26a. The numbers of non-BB2 Essex/north Kent reduced wares identified in the north dating to the second century are very small.

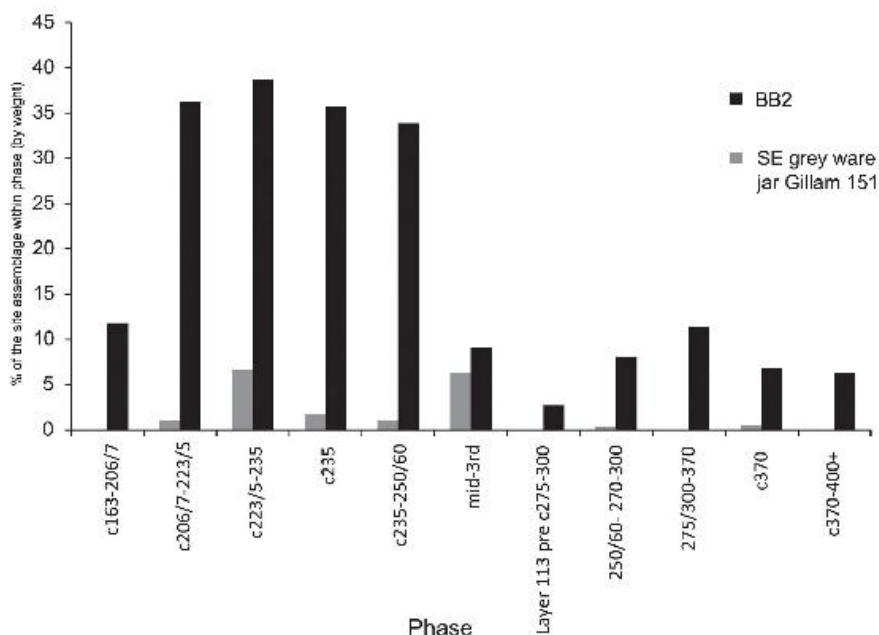


Figure 5.5. Deposition of BB2 and SE grey ware in dated contexts at Vindolanda. The Form 151 jar was found in the demolition layers of phase 2 at Vindolanda dated to c. AD 223–5. The form was present in other third-century groups but was absent in deposit 113 (phase 4b, total of 13.6kg pottery) which Bidwell (1985) dated to just before AD 275–300. Form 151 was most common at Vindolanda in phase 3 construction and demolition layers dated c. AD 223–35. Bidwell points out additionally that the form is absent in the Vindolanda destruction deposit of c. AD 180, suggesting importation began after that date. In addition to Form 151, Bidwell also identified a form in a similar fabric to the Form 151 jars described as a curved everted-rim jar (our type FA) at Vindolanda (Bidwell 1985, fig. 70 no. 120, MF fig. 2 nos 26–8). This jar type was the same as types made at Colchester (Hull 1963b, form 268A) and also at Mucking. At Vindolanda this jar type occurred in phase 4A/B dumps of c. AD 250.

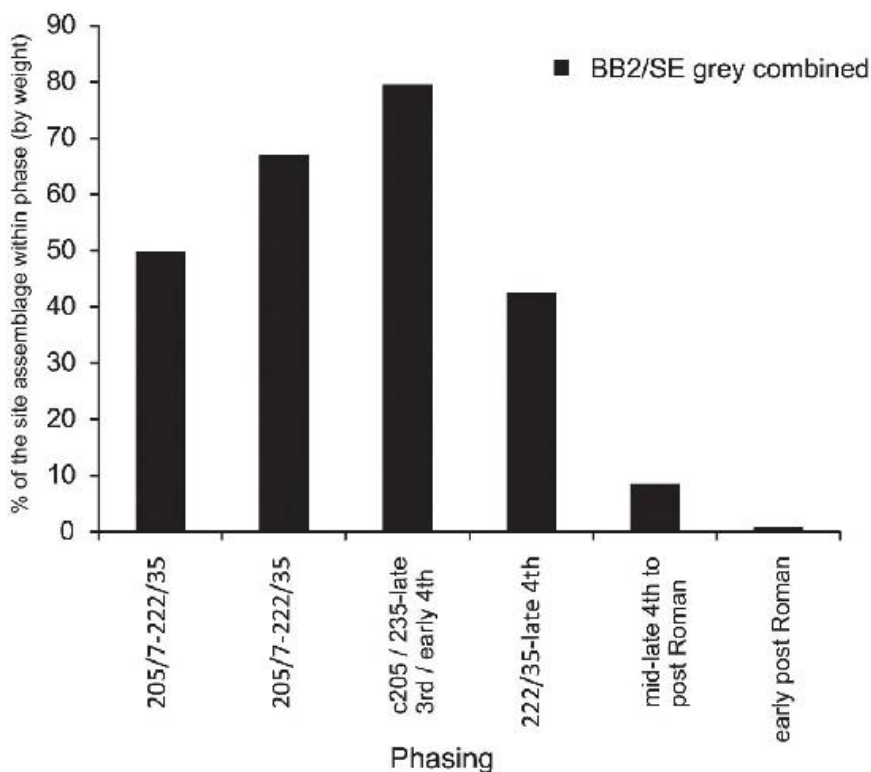


Figure 5.6. Deposition of BB2 and SE grey ware in dated contexts at South Shields. Bidwell notes that although there are four examples from earlier contexts as we have already noted (Camelon, Mumrills and period 1A turrets 25b and 26a), the majority of the vessels come from contexts dating from the third century and probably cease in the second half of the third century but continuing “for a considerable time after 250” (see Bidwell 1994, 224). This continued circulation after c. AD 250, Bidwell recognises, is at odds with dating used by ceramicists in the south.

In 1994 Bidwell wrote in more detail regarding the south Essex/north Kent (SENK) grey ware types on Hadrian’s Wall (1994, 228–31) in the South Shields report (Fig. 5.6). At South Shields the earliest incidence of lid-seated jar form 151 is in phase 5, dated to the early third century and this is “the earliest form 151 occurrence in the North” (1994, 228). A date around AD 220 is now favoured (Croom 2003, 245). In addition to this form, Bidwell lists examples of the narrow-necked jar with cordoned neck and zones of burnished decoration which he identifies as Mucking type N, large shell-tempered jars of North Kent type, necked jars as Mucking form group FA, a variant of form group FA with bead rims, necked bowls as

Mucking form group HA, beakers with everted rims as Monaghan 2A6, folded beakers as Monaghan 2D1 and 2D2, Mucking types NR and flacons as Monaghan types 1E1.2–4.

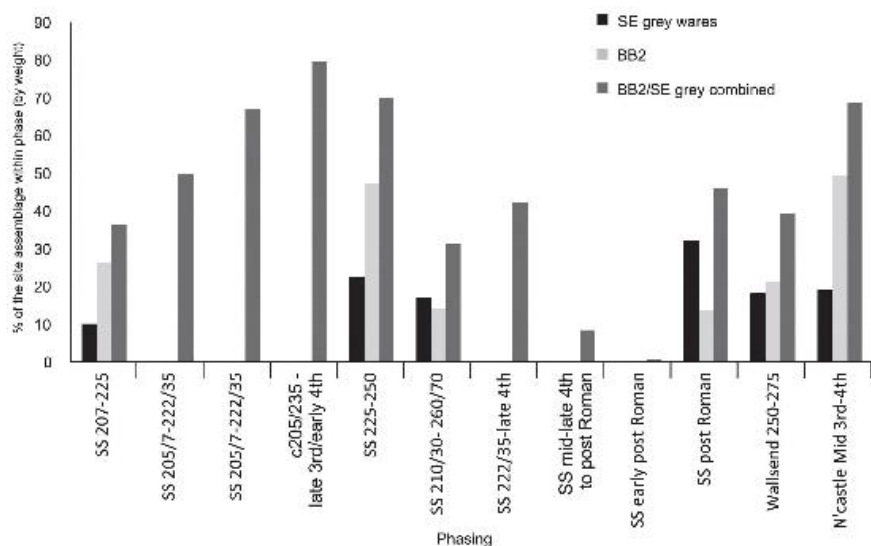


Figure 5.7. Deposition of BB2 and SE grey ware in dated groups at Wallsend, South Shields and Newcastle. This chart combines the data from the two excavation reports for South Shields (1994 and 2010) and also the Wallsend data given by Bidwell and a useful group from the Newcastle excavations (Bidwell & Croom 2002, table 15.13). In some instances BB2 and the SE grey wares were combined, but where differentiated both individual and combined figures are given. All figures are relative percentages using weight. Additionally data from the stratified groups excavated at Wallsend are given in [Figure 5.8](#).

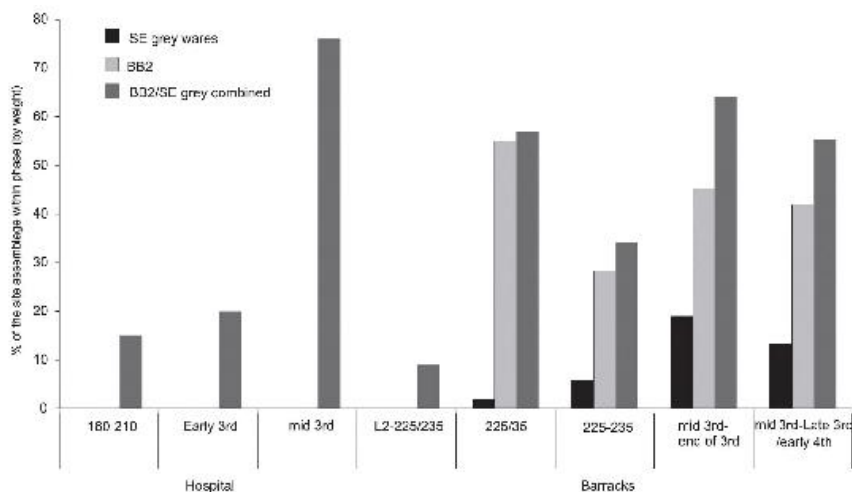


Figure 5.8. Deposition of BB2 and SE grey ware in stratified groups at Wallsend (Croom 2003, 244–5).

Further work by Bidwell and MacBride at South Shields (2010, table 10) demonstrated a marked increase in these southeastern grey wares in the third quarter of the third century at Wallsend and in the post *vicus* deposits at South Shields. The figures presented, 32% at Wallsend and 37% at South Shields (both using EVEs but rather less using weight: [Figs. 5.7–8](#)) further demonstrates importation of these grey wares after c. AD 250. It is clear from the quantified data that the southeast grey wares played a significant role in assemblages dating from around AD 220 until at least as late as the mid third century and perhaps even later. At South Shields a complete southeast grey ware jar was found in the floor of the period 7 barracks (dating from c. AD 286–312 (Croom 2003, 245) demonstrating these types were certainly still in regular use at the end of the third century or the beginning of the fourth century.

On the Arbeia Museum website (Bidwell n.d.2) the southeastern types identified and their contexts are listed (see Appendix 1). To this may be added a group of Mucking types identified by the author during a preliminary scan of material excavated by Oxford Archaeology North at the extra-mural settlement outside Maryport fort and associated with BB1 forms such as the grooved flat rim bowl and obtuse lattice jars of the third century. Further work needs to be done on this material and its location on the western coast is somewhat surprising. Until then it is worth noting that sherds from Mucking narrow-necked jar forms GC, wide-mouthed jar forms HA, necked jar forms FA, rebated-rim bowls AC08 and one rebated-rim jar type AB06 were present at Maryport and included examples with diamond rouletting decoration (see below).

The list in Appendix 1 demonstrates that many, but not all of the types present, are of Mucking type, indicating a range of sources for this ceramic group. However, some traits may be unique to the Mucking kilns. Diamond rouletting was identified early in the post-excavation process as being a particular characteristic of the Mucking potters (Birss 1982). Instances of this decorative technique were found 90 times in the Mucking database on forms and was found on Mucking type AC08 rebated rim bowl, AB06 rebated-rim jar, GC5 everted-rim narrow-necked jar, GD05, HA1 wide-mouthed jar, NQ funnel necked beaker and RB04 bead rim bowl/dish. It was present in Kilns 3, 4 and 5. Elsewhere diamond rouletting has been identified at Stanford Wharf on a long necked globular beaker in a group of two such beakers dated to the third to fourth century and on a sherd from

a narrow-necked jar associated with an Oxford mortarium type M17 dated to AD 240–300 (Biddulph & Stansbie 2012, fig. 2.8 nos. 42 & 48 and Young 2000). In the North diamond rouletting has been found on a rebated rim bowl and a wide-mouthed ‘S’-profile jar at Maryport (Leary unpublished) and on a narrow-necked jar at Wallsend (Bidwell website type 3.2 in a context dated after c. AD 250). The identification of the diamond rouletting motif, not found at the other Colchester and Kent kiln groups, indicates that at least a proportion of this ceramic group as identified on the northern frontier came from Mucking itself (Fig. 5.18).

At Stanford Wharf it is worth noting that Biddulph and Stansbie (2012, 12) found difficulties with the dating of the grey ware types of Mucking type traditionally dated to no later than c. AD 250. Biddulph and Stansbie found that although they had few key groups dated to the earlier third century and a marked increase in key groups dated to the second half of the third century, the date profile from all dated pottery indicated an increase in pottery types dating to the first half of the third century. They suggested that this anomaly may be the result of dating some forms to AD 200–50 which should be extended beyond AD 250. This hypothesis was further supported by the stratigraphic position occupied by the context assemblages with a date range restricted to c. AD 200–50 in their Late Roman LR2 phase dated AD 250–400+. In addition to this evidence, Maggi Darling also identified Mucking type grey wares at Caister-on-Sea including the AB06 rebated-rim jar, AB08 rebated-rim bowl, the narrow-necked jar group GC and wide-mouthed jar group HA, the necked jar group FA and storage jar JB02 (1993, 207–8). Darling dates this ceramic group from the late second to the mid to late third century and considered that these grey wares and non-Colchester BB2 vessels continued to be made after the “decline of ‘classic’ BB2 from Colchester in the third century”. Bidwell dates the end of BB2 production at Colchester to “a decade or so after AD 250” (1999, 496–7).

The northern evidence thus indicates a plentiful supply of grey ware vessels from the southeast industries around the Thames estuary in the first half of the third century which continued at least into third quarter of the third century before a decline thereafter. Several forms made at Mucking occur on site on Hadrian’s Wall from the early third century or possibly very late in the second century and these become increasingly common through the third century. The forms comprise examples of the narrownecked jar group GC/GD, the wide-mouthed jar group HA, and the rebated bowl type AC06 and 08, probably storage jar JB08, the necked FA jar group and possibly the indented beaker NR.

Distinguishing Functional Difference

In order to test the idea of military or otherwise ‘official’ inspiration behind the replanning of the settlement at Mucking and the reorganisation of its pottery production in the mid to later first century AD – plus its subsequent second-century developments – other aspects of the excavation record need now to be considered. To examine questions of site function and status, the feature types and finds assemblages need be further interrogated, particularly as to how they relate to agricultural production and to social status. The issues to be dealt with are: what the excavated structures and other features indicate about the nature of the settlement; what the finds indicate about the site as a whole, and whether, building upon [Chapter Three](#)’s case-studies, the finds assemblages can differentiate between areas of activity in terms of function or status. Obviously, also relevant here are the material cultural interrelationships – the linkages – between the settlement and its cemeteries, and these are duly addressed in this section’s final study.

Pottery Analysis

In order to establish whether functional differences between areas of the settlement in the different phases could be identified, a pottery analysis was carried out. This was conducted along the lines of those by Pitts (2007, 2008; Pitts & Perring 2006; see also Perring & Pitts 2013), who adopts a social and cultural approach to the analysis of Roman pottery, seeing it acting ‘as a vehicle for everyday social practices of consumption through its role as a container for food and drink permitting insights into the negotiation of identity’ (Pitts 2008, 496). The methodology used compares different settlements, and areas within settlements themselves, through their relative proportions of different vessel forms (these being derived from well-dated contexts). Although a region’s pottery will reflect overall trends in pottery

manufacture and supply, differences between sites with contemporary assemblages will reflect choices (and constraints) relating to social practice. Pitts' findings, based on a wide range of Late Iron Age to Roman sites in Essex and Hertfordshire, provide an excellent means of establishing the significance of the Mucking assemblage, and represent a methodological improvement on the preliminary analyses of vessel form presented by Jeremy Evans (2001).

The Mucking analysis presented here differs from those carried out by Pitts, however, in one fundamental respect. While Pitts analysed groups divided into phased stratified assemblages (i.e. grouping all the pottery assigned to features belong to 'Settlement Phase 1', with the exclusion of those containing excessive residual or intrusive material), this was felt not to be as informative when applied to the Mucking assemblages. This was due to the fact that much of the pottery at Mucking was recovered from ditch and well fills that saw long periods of deposition. Enclosure ditch RBI at Mucking, for example, saw pottery deposition from the later Iron Age right into the Anglo-Saxon period. Furthermore, many features displayed high levels of residual sherds. As the site had been primarily phased using a combination of pottery fabrics, as well as forms, it was felt more appropriate to analyse the pottery assemblages through this first variable. Imported and regional fabrics were obviously assigned to phase by their accepted dates, with the Mucking fabrics divided into 'Phase 1' (early shelltempered wares) and 'Phase 2' (early forms of grey wares). While there is necessarily some overlap between these (and some problems with the data recording, as outlined in [Chapter Three](#)), the general patterns of association between 'early' and 'later' forms and fabrics suggests a real chronological development in the pottery production at the site. [Table 5.1](#) gives the overall breakdown of fabrics by phase for the entire site assemblage. While this obviously means a cruder overall phasing than is often applied to Romano-British settlements, this was felt to reflect more accurately the limitations of the data (particularly the use of spit-digging rather than by context, except in isolated features). It also has the advantage that the pottery is being studied in terms of when it was produced, rather than when it was deposited; while this might be thought to be a minor problem at other sites, for Mucking it is a major one.

This data was then subdivided into a series of separate datasets that could be analysed independently. It was decided to treat the assemblages from the early kilns, the later kilns, and Well 4 separately, as these represent distinct groupings in their own right (the breakage profile from Well 4 indicating that whole vessels had been present in the destroyed building represented in its upper fills; see below). With these separated out within the dataset, the remainder

was then divided according to phase, as determined by fabric and form (with the proviso that this by no means provides a perfect phasing, merely a basis for analysis). The data was quantified by EVEs (estimated vessel equivalents); while this necessarily underestimates the total numbers of vessels present (as only those vessels represented by rim sherds are counted), it does provide a comparable basis by which to detect intra-site differences. It does not, however, include amphorae (as the dataset was not recoverable) or mortaria (as these had not been recorded by EVEs). The following datasets were, therefore, generated: Early kilns; Later kilns; Well 4; Latest Iron Age; Phase 1; Phase 2 and Phase 3.

[Table 5.2](#) shows the breakdown by vessel type, expressed in EVEs. With 1829.2 EVEs in total represented, the assemblage was dominated by food preparation vessels (72.5%), with dining (18.3%), drinking (6.7%) and serving vessels (2.4%) more minor components. This is partly, of course, due to the presence of kilns on the site: over a third of the entire site assemblage was directly associated with kiln structures (even though the data does not include the 3000 rim sherds reported from Kiln 2, as these were never input into the computerised catalogues; Jones & Rodwell 1973). Within these kiln assemblages, jars and other food preparation vessels accounted for 78.5% of the large kiln products, and 92.4% of the smaller kiln products ([Table 5.3](#)), thereby partly accounting for this dominance of jars and related vessels in the site assemblage as a whole. The distinctive Well 4 assemblage also biases the overall site figures. While it produced 5.7% of the entire site assemblage, 21% of the site's beakers, 83% of the samian platters and 67% of the samian cups were recovered from this feature alone. Once these three assemblages have been separated out from the breakdown of vessel type by phase, a more accurate picture of the settlement can be revealed, which displays interesting changes over time (the nature of the Well 4 assemblage, and its implications, are returned to below).

Considering the relative proportions of dining, drinking, food preparation and pouring vessels (expressed as a percentage of each type by phase), the overall emphasis on drinking seen in the later Iron Age phase and in Phase 1 becomes less important in Phase 2, where dining and serving vessels become more significant ([Table 5.4](#)). In terms of the importance of individual vessel forms within the generic types, further chronological patterning is apparent. Dishes only became a dominant vessel form in Phase 2 ([Table 5.2](#)). Platters display an inverse pattern, from dominance in the later Iron Age to relative insignificance by Phase 2. Samian, also, only seems to be of importance in Phase 2 dining assemblages. Drinking vessels declined

in overall importance through time, with only samian cups and beakers of any significance by Phase 2. In terms of pouring vessels, flagons are characteristic of Phase 1, while flasks dominate in Phase 2. Overall, the insignificance of the Phase 3 assemblage is noticeable: what forms were present mainly comprised bowls, dishes, jars, beakers, flagons and flasks, in that order.

Table 5.1. Breakdown of fabrics by phase: whole site assemblage as EVEs.

Fabric	Poss ID EVE	Def ID EVE	Total EVE	
Belgic B	16.56	105.07	121.63	
Belgic C	2.18	14.25	16.43	
Terra Nigra	0.00	0.10	0.10	
Terra Rubra	0.12	0.12	0.24	
Gallo-Belgic	0.17	0.30	0.47	
Mica Gilt	0.25	0.59	0.84	Conquest
Terra Rubra copy	2.79	7.45	10.24	
Eggshell	0.00	0.22	0.22	
Flint-gritted	0.11	4.01	4.12	
Lyon	0.00	0.33	0.33	
Belgic A	3.96	317.71	321.67	
London	0.89	54.70	55.59	
Colchester BB	0.00	0.50	0.50	
Flagon Series	1.43	11.73	13.16	Phase 1
GRY	0.63	559.06	559.69	
GRYS	0.60	415.97	416.57	
GFN	0.50	30.50	31.00	
GVC	0.15	115.75	115.90	
NSF	0.06	25.45	25.51	
Highgate	0.07	0.13	0.20	
French import	0.00	0.34	0.34	
Colchester CC	0.08	2.83	2.91	
East Gaulish	0.00	0.00	0.00	
Koln	0.52	1.53	2.05	
Moselle Valley	0.00	0.36	0.36	
Brockley Hill	0.45	4.06	4.51	
BB2 Type	506.00	33.72	539.72	Phase 2
GRY	0.00	3.11	3.11	
GRYS	0.00	16.90	16.90	
GFN	0.00	0.34	0.34	
GVC	0.00	0.20	0.20	
BB2 Type	0.20	0.08	0.28	
Nene Valley	0.08	3.92	4.00	
Much Hadham	0.75	3.32	4.07	
Parchment	0.00	0.63	0.63	
Late Shell-tempered	0.19	0.32	0.51	
A' L'Eponge	0.05	0.34	0.39	
Portchester fabric D	0.20	1.72	1.92	
Alice Holt	0.10	0.00	0.10	
Mayen	0.00	0.25	0.25	
Rettendon	0.00	0.00	0.00	
Oxfordshire CC	0.84	7.28	8.12	Phase 3
UNK	0.00	0.18	0.18	

The phased assemblages can be further examined, by separating them into different site areas. This has only been carried out for Phases 1 and 2, when the site layout itself appears to suggest functional and status differences.

Table 5.2. Breakdown of site assemblage by feature/phase and vessel type (by EVEs).

Dining	Well 4	Kilns	Sub-Kilns	IA	Phase 1	Phase 2	Phase 3	
Bowls	8.04	0.05	0.54	0.44	7.72	12.10	9.82	
Dishes	14.58	111.90	1.02	1.86	3.27	118.62	7.95	
Platters	0.18	0.05	0.65	2.27	1.49	0.37	0.00	
TS bowls	2.00	0.00	0.00	0.00	0.56	2.16	0.13	
TS dishes	12.13	0.00	0.00	0.00	2.18	10.61	0.00	
TS platters	2.59	0.00	0.00	0.00	0.00	0.50	0.00	
TOTAL	39.52	112.00	2.21	4.57	15.22	144.36	17.90	335.78
Drinking								
Beakers	20.25	8.06	0.07	18.61	26.64	16.19	6.42	
Cups	0.00	0.00	0.05	3.62	0.54	0.00	0.00	
TS Cups	14.93	0.00	0.00	0.00	0.42	6.80	0.00	
TOTAL	35.18	8.06	0.12	22.23	27.60	22.99	6.42	122.60
Food Prep								
Jars	20.20	449.53	31.52	100.60	251.30	423.10	6.47	
Storage jars	2.52	1.63	0.48	3.38	10.80	14.35	0.10	
Lids	1.09	0.25	0.83	1.36	1.77	1.54	0.08	
Bucket	0.00	0.00	0.14	0.07	2.70	0.05	0.00	
TS Mortaria	0.00	0.00	0.00	0.00	0.00	0.29	0.00	
TOTAL	23.81	451.41	32.97	105.41	266.57	439.33	6.65	1326.15
Serving								
Flagons	1.21	0.00	0.13	0.47	9.10	3.92	2.49	
Flasks	3.73	3.74	0.25	0.28	0.11	18.89	0.31	
TOTAL	4.94	3.74	0.38	0.75	9.21	22.81	2.80	44.63

Looking at vessel types by phase and site area, expressed in EVEs (Table 5.5), it is obvious that within each phase, different areas were dominated by different vessel forms. In Phase 1, for example, the northwest saw the most jars and storage jars, whereas the northeast area (including the Central Enclosure) was dominated by drinking and dining products, and is where most of the samian products in this phase were found. In Phase 2, the emphasis shifted away from the northwest area, with the southeast area dominating the pottery assemblages in numerical terms. In percentage terms, while jars remained the dominant vessel type in all areas in both phases (Table 5.6), the Phase 1 emphasis on drinking vessels, identified above, is particularly characteristic of the northeast area, which also saw the highest percentage of dining vessels; pouring vessels characterise the southeast area, along with jars, and might suggest that this area of the site saw supportive or subsidiary activity during this phase. Phase 2 overall saw less of an emphasis on jars and drinking vessels, but a greater focus on dining vessels, especially in the northwest and

northeast sectors. It should be noted that the nature of activity in the northwest area during this period may have been restricted to the deposition of waste material into open features, particularly kiln waste from Kiln 6 into ditch B27 and surrounding features. In more detail, this Phase 2 emphasis on dining vessels (Table 5.6) was mainly based on dishes, whereas bowls dominated the northeast and southeast areas in Phase 1. The drinking vessels were dominated by beakers in Phase 1 in all three areas, but samian cups only featured in the northeast area, with this continuing into Phase 2 here. Overall, the northeast area saw less of an emphasis on jars than the other areas, again suggesting a higher status.

How does this compare with sites such as Elms Farm, Heybridge (Pitts 2007) and others in Essex and Hertfordshire (Pitts 2008)? To compare first with Heybridge, Mucking shares the later Iron Age dominance of the assemblages by jars and beakers. Later Iron Age Mucking apparently has no imported samian and few Gallo-Belgic wares, and saw less emphasis on dining and pouring vessels, compared to Elms Farm; perhaps not surprising, given the latter's road network and temple, even if its status was declining by this time (Pitts 2007). Mucking also displays the general sense of continuity into the Early Roman period as seen at Heybridge; overall though, Phase 1 at Mucking witnesses a very high proportion of jars within the assemblage (especially in the northwest and southeast areas), with a lower emphasis on drinking and dining. This is perhaps an effect of the Phase 1 kiln production; although the kiln contents themselves were taken out of the Phase 1 data-set and analysed separately, a proportion of the kiln waste will have become incorporated into nearby pit and ditch fills, and could be skewing the assemblage (indeed, a number of the sherds have their condition recorded as flaked or distorted).

Table 5.3. Relative proportions of activity-related vessels by feature/phase.

As % of Context:	Well 4	Kilns	Sub-Kilns	IA	Phase 1	Phase 2	Phase 3
Dining							
Bowls	7.8	0.0	1.5	0.3	2.4	1.9	29.1
Dishes	14.1	19.5	2.9	1.4	1.0	18.8	23.5
Platters	0.2	0.0	1.8	1.7	0.5	0.1	0.0
TS bowls	1.9	0.0	0.0	0.0	0.0	0.3	0.4
TS dishes	11.7	0.0	0.0	0.0	0.2	1.7	0.0
TS platters	2.5	0.0	0.0	0.0	0.0	0.1	0.0
TOTAL	38.2	19.5	6.2	3.4	4.2	22.9	53.0
Drinking							
Beakers	19.6	1.4	0.2	14.0	8.4	2.6	19.0
Cups	0.0	0.0	0.1	2.7	0.2	0.0	0.0
TS Cups	14.4	0.0	0.0	0.0	0.1	1.1	0.0
TOTAL	34.0	1.4	0.3	16.7	8.7	3.7	19.0
Food Prep							
Jars	19.5	78.2	88.3	75.7	79.4	67.2	19.2
Storage jars	2.4	0.3	1.3	2.5	3.4	2.3	0.3
Lids	1.1	0.0	2.3	1.0	0.6	0.2	0.2
Bucket	0.0	0.0	0.4	0.1	0.9	0.0	0.0
TS Mortaria	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	23.0	78.5	92.4	79.3	84.2	69.8	19.7
Serving							
Flagons	1.2	0.0	0.4	0.4	2.9	0.6	7.4
Flasks	3.6	0.7	0.7	0.2	0.0	3.0	0.9
TOTAL	4.8	0.7	1.1	0.6	2.9	3.6	8.3
GRAND TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 5.4. Breakdown of site assemblage by percentage.

	Well 4	Kilns	Sub-Kilns	IA	Phase 1	Phase 2	Phase 3
Dining	38.2	19.5	6.2	3.4	4.2	22.9	53.0
Drinking	34.0	1.4	0.3	16.7	8.7	3.7	19.0
Food Prep	23.0	78.5	92.4	79.3	84.2	69.8	19.7
Serving	4.8	0.7	1.1	0.6	2.9	3.6	8.3

In Phase 2, Mucking sees generally higher dining and food preparation vessel proportions, and lower drinking and pouring figures than Heybridge (this would, however, be transformed if the Well 4 assemblage was included, with its high proportion of drinking vessels). While the northeast area maintains its dominance of the

samian assemblage in Phase 2, these vessels are also now found in the southeast area. In general, then, the pottery assemblage at Mucking reflects the general chronological trends identified by Pitts at Heybridge (2007): the transition from a drinking-based Iron Age society to a dining-based ‘Romanised’ culture. This does, however, come with the proviso that drinking-related vessels remain especially high in the northeast area during Phase 1 (with the laying out of the regular Central Enclosure), with dining only coming to the fore in the subsequent phase. Whatever lay behind this transition, it seems to have been a gradual one. Perhaps, as Pitts (2007) suggests, this is a matter of a continuing population adapting their habits to suit the available ceramic supply. Willis (2004) notes that rural sites in Essex are distinctive for their relatively high proportions of samian cups, a pattern also seen at Mucking, but we also see the general decline in these vessels as noted at Heybridge; Pitts (2007) suggests that this indicates ‘consumer choice’ becoming subordinate to broader patterns in supply.

Table 5.5. EVEs by vessel types/function and phased area.

	Phase 1NW	Phase 1NE	Phase 1SE	Phase 2 NW	Phase 2 NE	Phase 2 SE	Phase 3 NW	Phase 3 NE	Phase 3 SE
Dining									
Bowls	1.10	4.19	2.43	0.13	2.34	9.63	0.00	0.00	1.63
Dishes	1.13	1.84	0.30	9.28	37.92	64.02	0.00	0.06	15.29
Platters	0.70	0.42	0.37	0.00	0.18	0.19	0.00	0.00	0.00
TS bowls	0.00	0.46	0.10	0.00	1.03	1.13	0.00	0.00	0.00
TS dishes	0.30	1.61	0.27	0.06	3.65	6.90	0.00	0.00	0.00
TS platters	0.00	0.00	0.00	0.00	0.12	0.38	0.00	0.00	0.00
TOTAL	3.23	8.52	3.47	9.47	45.24	82.25	0	0.06	16.92
Drinking									
Beakers	5.24	16.89	4.49	0.28	4.89	10.79	0.00	0.24	0.76
Cups	0.09	0.13	0.32	0.00	0.00	0.00	0.00	0.00	0.00
TS Cups	0.06	3.46	0.00	0.03	3.89	2.56	0.00	0.00	0.00
TOTAL	5.39	20.48	4.81	0.31	8.78	13.35	0	0.24	0.76
Food Prep									
Jars	148.40	48.00	54.90	18.77	91.31	310.39	0.41	0.00	3.11
Storage jars	8.01	1.10	1.59	1.90	6.31	6.14	0.00	0.00	0.00
Lids	0.75	0.77	0.25	0.00	0.86	0.68	0.00	0.00	0.00
Bucket	2.31	0.00	0.39	0.00	0.00	0.05	0.00	0.00	0.00
TS Mortaria	0.00	0.00	0.00	0.00	0.05	0.24	0.00	0.00	0.00
TOTAL	156.41	49.10	56.49	20.67	97.62	316.53	0.41	0	3.11
Serving									
Flagons	0.64	3.21	5.25	0.40	1.95	1.57	0.00	0.00	1.00
Flasks	0.11	0.00	0.00	0.39	3.81	14.69	0.00	0.00	0.00
TOTAL	0.75	3.21	5.25	0.79	5.76	16.26	0	0	1
GRAND TOTAL	174.23	102.56	75.47	31.55	167.09	442.71	0.41	0.54	22.55

Table 5.6. Relative proportions of activity-related vessels by phased area.

	Phase 1NW	Phase 1NE	Phase 1SE	Phase 2 NW	Phase 2 NE	Phase 2 SE	Phase 3 NW	Phase 3 NE	Phase 3 SE
Dining									
Bowls	0.6%	4.1%	3.2%	0.4%	1.4%	2.2%	0.0%	0.0%	7.2%
Dishes	0.6%	1.8%	0.4%	29.4%	22.7%	14.5%	0.0%	11.1%	67.8%
Platters	0.4%	0.4%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
TS bowls	0.0%	0.4%	0.1%	0.0%	0.6%	0.3%	0.0%	0.0%	0.0%
TS dishes	0.2%	1.6%	0.4%	0.2%	2.2%	1.6%	0.0%	0.0%	0.0%
TS platters	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%
TOTAL	1.9%	8.3%	4.6%	30.0%	27.1%	18.6%	0.0%	11.1%	75.0%
Drinking									
Beakers	3.0%	16.5%	5.9%	0.9%	2.9%	2.4%	0.0%	44.4%	3.4%
Cups	0.1%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TS Cups	0.0%	3.4%	0.0%	0.1%	2.3%	0.6%	0.0%	0.0%	0.0%
TOTAL	3.1%	20.0%	6.4%	1.0%	5.3%	3.0%	0.0%	44.4%	3.4%
Food Prep									
Jars	85.2%	46.8%	72.7%	59.5%	54.6%	70.1%	100.0%	0.0%	13.8%
Storage jars	4.6%	1.1%	2.1%	6.0%	3.8%	1.4%	0.0%	0.0%	0.0%
Lids	0.4%	0.8%	0.3%	0.0%	0.5%	0.2%	0.0%	0.0%	0.0%
Bucket	1.3%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TS Mortaria	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
TOTAL	89.8%	47.9%	74.9%	65.5%	58.4%	71.5%	100.0%	0.0%	13.8%
Serving									
Flagons	0.4%	3.1%	7.0%	1.3%	1.2%	0.4%	0.0%	0.0%	4.4%
Flasks	0.1%	0.0%	0.0%	1.2%	2.3%	3.3%	0.0%	0.0%	0.0%
TOTAL	0.4%	3.1%	7.0%	2.5%	3.4%	3.7%	0.0%	0.0%	4.4%

Comparison of the pottery assemblages with a wider study of Late Iron Age to Roman sites in Essex and Hertfordshire (Pitts 2008) gives further indications as to the character of the Mucking's settlement. The later Iron Age assemblage pottery from Mucking most resembles (in crude terms) the contemporary rural settlements at Woodham Walter and Nazeingbury, with particularly high proportions of jars and drinking vessels; this would accord with the view of the importance of drinking practice in later Iron Age society in the region (Pitts 2008, 497). While *oppida* and related sites employed imported Gallo-Belgic pottery (*ibid.*), rural sites seem to have made more use of copies. These would probably have been locally produced, as was certainly the case at Mucking. The opposing style of social consumption – one based on samian imports and dining vessels (*ibid.*, 500) – starts to be seen at Mucking in the later first century AD, but only in the northeast Central Enclosure-area. Otherwise, it is not until Phase 2, after around AD 120, that this consumption pattern becomes dominant in all sectors at Mucking. It is interesting that of the pottery profiles most similar to the Mucking subassemblages, the temple area at Chelmsford (*ibid.*, table 3) resembles Mucking Phase 1 northeast and later on, Mucking Phase 2 southeast. These Chelmsford assemblages (unlike its *mansio* area to the southeast) made heavy use of locally made Romano-British pottery, especially jar forms and dining vessels, and is the area thought likely to have catered for the local populace (*ibid.*, 500).

These contrast with Mucking Phase 1 northeast – most resembling the rural site at Ardleigh from AD 40–80 – and Mucking Phase 2 northeast, which mirrors pottery use at Elms Farm, Heybridge in the period AD 125–170. While Ardleigh is a rural site, Elms Farm is a nucleated settlement. The pottery characteristics of Mucking Phase 2 northeast may, therefore, suggest closer links with higher status lifestyles in the second century AD. Mucking's Well 4 assemblage is particularly interesting in this respect as, at first glance, it does not resemble any of the data-sets examined by Pitts. Its low proportion of jars is paralleled at urban sites such as Colchester and Verulamium, but its proportion of drinking vessels is higher – and its dining vessels lower – than these sites in the mid to later second century. The explanation must lie in the fact that it is not an assemblage with a normal breakage pattern, but the contents of a household that had been destroyed by fire and dumped, largely complete, into a nearby well. The significance of this deposit will be explored further below, but it should be noted here that a parallel is seen in pit K4943 at Elms Farm, Heybridge (Pitts 2008, table 2). Although having a total EVE of just 0.62 (Pitts 2007, table 22), the contents of that pit were suggested to indicate a localised resurgence of older drinking practices, seen

both in Area K at that site and at Area B at Baldock (Pitts 2008, 501). Intriguingly, these pit deposits at Heybridge and Baldock also included ‘heirloom’ pottery associated with Late Iron Age drinking culture: butt-beakers at Elms Farm and cauldrons at Baldock (*ibid.*). A similar feature is also seen in the Mucking Well 4 deposit, with fragments of local later Iron Age beakers, a *Terra Nigra* platter and a sherd of Gallo-Belgic flagon. As well as these antique pieces, there were also a large number of sherds of girth beaker in ‘London’ fabrics, and a large collection of samian. The latter was dominated by cups and dishes, and included a number of pieces of mid to later first-century date. First interrogated in [Chapter Three](#) above, this assemblage is examined in further detail below.

While there are hints of unusual activity at the site – particularly in terms of the composition and origin of the Well 4 assemblage – in general terms the site at Mucking closely resembles other rural sites in the southeast in its pottery assemblage. This does not, however, quite hold true for its amphorae. Although the data do not survive to associate this material closely with phased deposits (the common Gallic and Dressel 20 forms both dating generically to Phase 1/2), in numerical terms they comprise around 0.8% of the total site assemblage; according to Evans (2001, fig. 11), this would place them into the small town/villa category of site. Again, though, this figure is biased by the Well 4 assemblage. While it is difficult to be certain in the absence of detailed records, it seems that around a quarter of the amphorae sherds by number came from this feature; thus comprising around 3.6% of the assemblage, and classifying them as ‘military’ under Evans’ model (but again, the breakage pattern from this assemblage implies that this does not represent normal deposition). Even after removing these sherds from the site total, the proportion of amphorae sherds would still be at least 0.6%, rather more than would be expected from a strictly rural site.

Well 4 (Redux)

With this extraordinary feature’s closing deposits already discussed in [Chapter Three](#), a remaining issue is whether any elements of its assemblage were present elsewhere on the site. Perhaps the best guide to this is through interrogation of the pottery database, to see if any other sherds of London Ware or dishes in BBT2 fabric have signs of burning, and then examining the deposits in which such sherds were found. While the vast majority of burnt BBT2 sherds did indeed come from Well 4, there were also a few from the pits cut into the backfilled Phase 1 Central Enclosure northern ditch (A1A), one from structure PG71, and a few from the fill of ditches B27 and B36 in the Western Enclosures. Burnt London Ware sherds are also seen in these two

ditches, and in the successive boundary ditches of the Central Enclosure, as well as from quite deep levels within Well 6. One of the ditch A1A pits also produced a single sherd of burnt Lezoux dish from among a small samian assemblage. Examination of these particular assemblages does not, on the whole, bear out the suggestion that these could form part of the 'burnt' assemblage. Both ditch B37 and the assemblage in Well 6 are dominated by jars and grey ware dishes (Table 5.7). While the London Ware beaker sherds in Well 6 could conceivably have come from the burnt down structure (four of them are burnt), the remainder of the assemblage does not match the profile of the Well 4 group: the dishes are mainly in grey wares, and there is little samian (none burnt), some deriving from Eastern Gaul and probably post-dated the infilling of Well 4. Roundhouse PG71 produced 10 sherds of samian (all second-century Central Gaulish Lezoux, apart from an earlier burnt and abraded southern Gaulish Curle 11 sherd, along with 6.83 EVEs (575 sherds) of other pottery, 0.61 EVEs of which were burnt. This could conceivably represent part of the burnt deposit: the only bowl from PG71 was in London Ware, while the sole BBT2 dish was burnt (although the majority of dishes were in grey wares). The origins of this pottery deposit must remain uncertain, however.

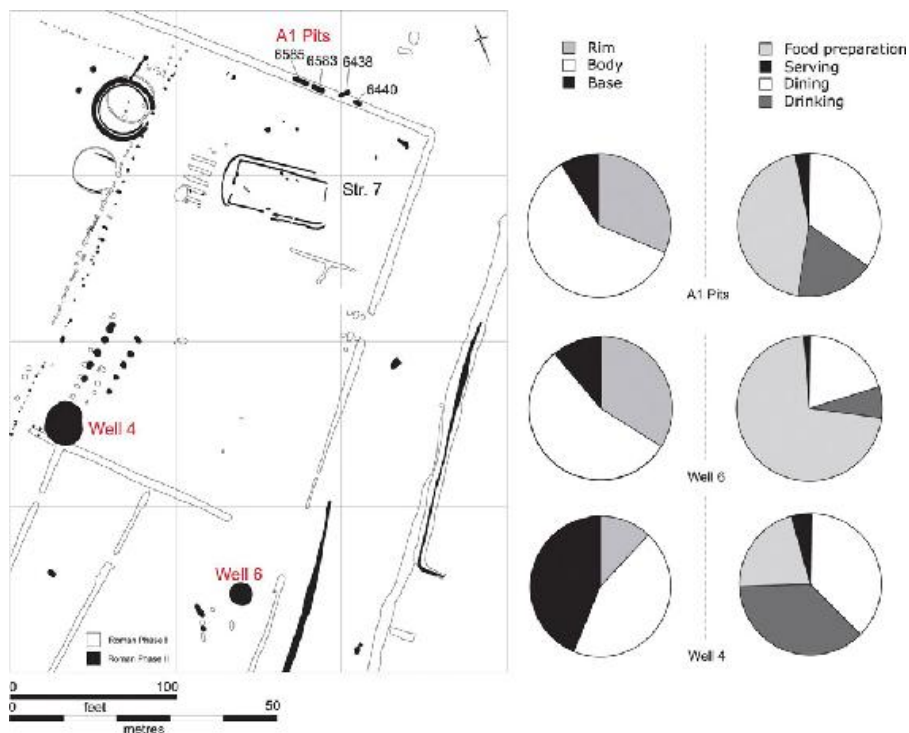


Figure 5.9. Central Enclosure and A1A pits, pie charts of assemblage composition by vessel part and function.

There is though a possibility that the pits dug into the infilled ditch A1A received some of the burnt assemblage (Fig. 5.9). Totalling 18.04 EVEs, their deposits included London Ware bowls and beakers, black-burnished dishes, flagons and Lezoux samian (with other samian also). Only a handful of sherds, however, showed any signs of burning (mainly black-burnished dishes), which could conceivably represent accidental breakage. Moreover, the breakage pattern of these deposits corresponds to the 'normal' pattern of many bodysherds, and more rims than bases (unlike the Well 4 deposit; Table 5.8). Perhaps these pits represent rubbish disposal for the later burnt down structure during its usage? This would account for the incidence of some rare vessels both within the Well 4 deposit and the ditch A1A pits, such as the fragments of Koln beakers from the site (96 sherds, 1.53 EVEs) and of Colchester colour-coated beakers (177 sherds, 2.83 EVEs).

This distributional pattern may also shed light on the identity of the structure represented in Well 4. The unusual apsidal-ended building, Structure 7, lay just to the south of the ditch A1A pits, and it can be suggested that it was debris from it that was being deposited within them. Structure 7 also lay only 50m northeast of Well 4, which may have represented the nearest convenient hollow into which to clear destruction debris. The unusual layout of that building may also account for the large amount of daub recovered from Well 4's deposit. The structure was apparently double-walled, with shallow foundation gullies displaying internal stake- and postholes. It is conceivable that these represent the internal and external faces of a brickearth, turf or cob wall, those faces being of rendered wattle and daub construction. Destruction by fire would have resulted in a large amount of burnt daub, but little other structural debris, and without necessarily any belowground burning. Such bulk-wall construction without internal postholes would also have provided suitably robust foundations for the tiled roof that seems to have been present on the destroyed structure.

Table 5.7. Assemblages from possible Well 4 related features, by vessel type (EVEs).

EVEs	PG71	B27	Ditch A1 Pits	Well 6	CD1
Dining					
Bowls	0.06 (LN)	0.22	0.1 (All LN)	0.03 (ROX)	0.02
Dishes	2.38 (GRY/S)	5.32 (0.27=BBT2 4.43=GRY/S)	4.42 (2.57=BBT2)	4.13 (4.01=GRY/S)	1.3 (All GRYS)
Platters	0	0.02 (All BL)	0	0	0
TS bowls	0	0	0.06	0.04	0
TS dishes	0.08	0	0.49 (All Lezoux)	0.29	0.32 (all CGL)
TS platters	0	0	0	0.06	0.06 (All CGL)
Drinking					
Beakers	0.45 (NVD/CLC/LN)	0.67 (0.51=LN)	1.52 (0.82=LN 0.44=CLC)	1.45 (1.06=LN)	0.63 (All LN)
Cups	0	0	0	0	0
TS Cups	0.07	0	1.4 (mixed)	0	0
Food Prep					
Jars	3.7 (3.01=GRY/S)	37.0 (26.91=BL 8.52=GRY/S)	7.06 (1.68=BL 4.25=GRY/S)	15.41 (1.33=BL 13.87=GRY/S)	3.49 (3.30=GRY/S)
Storage jars	0.09 (GVC)	0.88 (0.50=GVC)	0.76 (All GVC)	0.9 (0.6=GVC)	0.12 (All GVC)
Lids	0	0.04	0	0	0
Bucket	0	0	0	0	0
TS Mortaria		0	0	0	0
Serving					
Flagons	0.15	0	0.15 (All=FLC)	0	0.14 (LN)
Flasks	0	0.1	0.42	0.32	0

Table 5.8. Pottery breakage patterns from Well 6 and the ‘D’ pits.

Ditch A1 Pits	Nos.	%
Rim	187	11.04
Body	942	60.04
Base	140	8.92
TOTAL	1569	
Well 6	Nos.	%
Rim	637	33.60
Body	1049	55.33
Base	210	11.08
TOTAL	1896	

Metalwork and Other Category Distributions

Intriguingly, the jewellery within Well 4 is the only evidence for female-associated material culture within the Central Enclosure, and all the site’s other items of jewellery were recovered from the areas to the west and south. Dress accessories, including brooches and personal items such as tweezers and ligula, likewise generally either came from Well 4 or from the southern enclosures (Fig. 5.10). Similarly, most of the domestically-associated copper alloy derived from the Well 4 burnt assemblage, with just a scatter from the rest of the site. Surely indicating a high degree of recycling, this may reflect more on patterns of rubbish disposal than being a general indication of gender presence or absence, but it does start to suggest that the Central Enclosure was sparsely inhabited, as indeed its paucity of archaeological features generally suggests. Military and official artefacts were similarly limited to the Southern Enclosures (the two

sealbox fragments came from the Southern Enclosure system), whereas copper alloy craft items and tools were found in the Central Enclosure ditches and in the far southeast of the site. While this might indicate that craft activities were confined to certain areas of the settlement, the more numerous iron craft and agricultural tools were more widely scattered over the Western, and particularly the Southern, Enclosures (Fig. 5.10). The one steelyard fragment was found in GH 55 within that area and must have been redeposited (along with many of the later Roman coins; see Chap. 3 and below). The solitary stylus was found in the Western Enclosures, and may represent a casual loss. Patterns of metalwork distribution do not, therefore, indicate particular functional areas, except in that most craft, industrial and personal items were found in the Western and Southern Enclosure areas. The latter must represent areas of densest occupation, with the Central Enclosure apparently reserved for the higher status establishment, whatever its nature, that in its final form was represented in the Well 4 burnt assemblage. Again, the contrast between Well 4 and its apparently impoverished surroundings indicates just how much material does not become incorporated into archaeological features; only the broken pottery assemblage from the Central Enclosure ditches gives a true picture of the status it enjoyed.

Are these area-status differences reflected in other material classes? Along with the pottery, perhaps the best indicator is ceramic building material. While some of this is likely to have been recycled, the remainder would probably have been disposed of close to its source (Fig. 5.11). The distribution of *tegulae* shows one cluster in Well 4 and in the ditches of the Central Enclosure and adjacent features, with a further dense spread in the ditches and features of the Southern Enclosure system (although the picture is somewhat confused here by the frequent curation/inclusion of this building material in the fills of *Grubenhäuser*). Roman brick sees a similar pattern, with additional deposition into upper fills of the North Enclosure, which may relate to Anglo-Saxon-phase activity. The distribution of *tubulae* is again similar, although a major cluster is seen in the southeast quadrant of the Central Enclosure, and the same is true of *imbrices*. Overall the patterning seen (once finds within Anglo-Saxon features are removed from the plot) suggests that buildings with tiled roofs had probably been present within the Central Enclosure and in the Southern Enclosure-area, perhaps within the RBI and RBII enclosures.

The distribution of quernstone is largely uninformative (again, many fragments were redeposited), but it may be of interest that the three querns with estimated diameters in excess of 600mm – likely to indicate powered rather than hand-use – were all within Central Enclosure ditches; two were of lava stone and one in Millstone Grit.

This could suggest processing (and a concomitant need for storage) on a larger scale than is in evidence from the rest of the site, and correspond to the suggested functions of the aisled buildings and storage structures within the Central Enclosure.

Fragments of glass vessels show a clear focus on the Central Enclosure, particularly in Well 4, but also in the postholes of the fenced enclosure, the enclosure ditches themselves and PG71 (Fig. 5.11). While some fragments occurred within the Southern Enclosure system – thereby providing further evidence for some relatively high status occupation in this part of the site, particularly in the northern half of the RBII enclosure – many were in late feature fills (like some of the pottery and metalwork, glass at Mucking was often found within Anglo-Saxon period features).

In terms of animal bone, species distributions do not show any clear patterning, with horse, sheep and cattle all with widespread scatters. In any case, numbers of recovered bones are so low, compared to other rural sites, that clear conclusions cannot be drawn. One pattern of interest is the distribution of bones with indications of butchery. These concentrated in the Southern Enclosure system (although Wells 4 and 6 also produced some evidence); it may be that primary butchery was taking place to the south, with jointed meat represented in the well assemblages and nearby ditches. The distribution of burnt and charred bone matches this pattern, perhaps indicating the remains of cooked meat. That said, two of the three butchered horse bones from the site come from Well 4 and the pits to the north of Structure 7 (the third is from the ‘Enigma’ hollow in RBII); the significance of this is unclear.



Figure 5.10. Distributions (III): Romano-British jewellery, dress accessories and personal items (left); right, craft and agricultural items.



Figure 5.11. Distributions (IV): tegulae and tubulae tiles (left); right, glass by type.

Sets for the Living (and Dead)

Given the vast scale of the site's assemblages and this book's intended focus on distributional analysis, this chapter attempts a final case-study. Unlike the settlement-focused studies presented in [Chapter Three](#), here we need to find means by which to interrelate its settlement and cemeteries in order to investigate issues of function and status.

That 'sets' existed and material culture was employed in such a 'group-ensemble' manner is apparent when appraising the cemeteries' grave-goods. The most obvious instance is Cremation 911's 11 lamps, of which at least six are likely to have been made from the same mould (see Bailey, [Chap. 4](#)), and that deposit's pottery – eight platters, three *tazze* and five beakers – also probably constituted a set(s) of some kind.

What is attempted here directly arose from the results of [Chapter Three](#)'s Well 4 and graffiti/batchmarks studies, as it was recognised that the site's stamped samian pottery might have comparable

potential. As presented in [Table 5.9](#), the frequencies of the 75 stamps were established and then plotted (with only 'distant'/cross-site linkages individually distinguished in [Fig. 5.12](#)). With the knowledge that many of the Albucius-stamped vessels occurred in Well 4's deposit, the rationale behind this exercise was that items might have been acquired as 'batchlots' and, therefore, their distribution could theoretically document the dispersion of sets. As is apparent in that table, the results were initially disappointing, with the vast majority of the identical stamps only occurring in ones or twos, which might suggest their *ad hoc* acquisition. Only in the cases of the four stamps of Tituronis and the 11 of Albucius did they occur in greater numbers. Yet, even in this our ambitions were thwarted, as it was found that all of the Albucius pieces actually came from Well 4; the implications of this are considered below.

Plotting this material showed only five such 'linkages' ([Fig. 5.12](#)). This included two in the southern half of the site: Do(v)eccus-stamped Drag 31 occurring both within the Southern Enclosures-area and the Central Enclosure's outer circuit, with Minutus-stamped vessels separately found within Cemetery IV's Cremation 1070 and associated with Corn-drier 3. Another 'stamp-linkage' – Vagi-ro – occurred in both of Cemetery II's Graves 898 and 899. Otherwise the remaining 'connections' somehow all involved Well 4 (this not being surprising given the scale of its samian assemblage). This included a Laxtucissa-stamped vessel, with another coming from a ditch close to the eastern entrance of the Central Enclosure. Perhaps most important, though, are the Tituronis-stamped vessels. An Antonine potter working in Lezoux (AD 160–190), there were two of his vessels in that well, with other such stamped pieces amongst Grave 899 and Cremation 903's grave-goods. With both occurring close to Well 4 in that enclosure's cemetery (No. II), this may not seem particularly noteworthy. Yet, as amongst that cemetery's most richly furnished graves, this provides an inferential link between these burials and whatever was the residential source of that well's closing deposit. (Altogether 12 of the stamped vessels occurred in burials, with 10 of these within Cemetery II.)

Aside from a decorated bowl, Well 4's Albucius-stamped vessels consisted of five cups and four dishes (plus an unknown form). That all of his stamped wares on the site came from that feature alone could give further credence to the idea that its closing deposit reflects, if only in part, the contents of a household (or potentially a shop). Certainly, this is not how sets seem to have been assembled to accompany the site's dead. We will first consider those burials where there were single stamped samian vessels: in Grave 898 the Vagi-ro dish occurred alone and the child's burial was without other grave-goods ([Fig. 4.36](#)); the Minutus-stamped dish in Cremation 1070

(adult) was set as a lid within the mouth of a large grey ware storage jar (with graffiti on its shoulder) and there was also a small grey ware flask set within that vessel (Fig. 4.61); Cremation 83's Saturnis-stamped dish/platter sat beside an upright grey ware jar in which was placed a Verulamium Region white ware flagon (Fig. 4.85), along with the cremated bone (adult male); although the Cunoptus-stamped cup in Cremation 902 (adult male) was its only samian vessel, this was a rich grave and, aside from a London Ware bowl (imitating a samian Drag 30 form), a grey ware jar and two Colchester colour coat beakers, it included the eagle-headed finial (see Figs. 4.40 & 5.13–14).

In addition to two stamped vessels – a Glosabinia dish and a Tituronis cup – along with a casket, Cremation 903 (adult) had six other vessels: a dish or lid imitating a samian form (Drag 38), a grey ware jar, a poppyhead beaker and three black burnished ware dishes (Figs. 4.39 & 5.13). Finally, there is the evidence of Grave 899, a child's burial which, in total, had 12 vessels (Fig. 4.37). Remarkably among these were six samian stamped vessels: cups by Mainina and Remicus, with dishes having Aestivus, Tituronis, Vagiros and Decmus stamps; there was also another samian cup (unstamped but with a graffiti, 'XXII'), two Verulamium Region white ware flagons, two black burnished ware dishes and a large grey ware storage jar.

With the latter, of course, unlikely to actually reflect a child's personal possessions, this highlights that gravegood assemblages should not be confused with daily-life 'sets' and that their composition would surely have been governed by both symbolic factors and the expressive concerns of mourners. Nonetheless, at a very basic level these burial assemblages indicate just how different was Well 4's Albucius-stamped material and, if they were in any way reflective of daily usage, suggests that using same-potter-stamp sets was not a major concern. That said, 'matching multiples' of fabric and form do occur: Cremation 903 and Grave 899's black burnished ware dishes (three and two respectively), plus also the latter's three samian cups. The same is also true of Cremation 911's assemblage: three Verulamium white ware *tazze*, five Colchester colour coat beakers and eight grey ware dishes. Regardless of whether this represents a ritual *epula* deposit (as opposed to a cremation *per se*), with the exception of the *tazze* – likely to relate to incense burning – all three of these interments involved service sets for group eating and drinking.

Within Mucking's cemeteries only one other burial had six or more vessels: Cremation 1071 in Cemetery IV. This, however, did not involve matching-type multiples and, aside from various grey ware jars, a bowl and a miniature dish in that fabric, there was just one black burnished ware dish (plus the foot-ring from a samian vessel; there were no cups). Indeed, it was only Cemetery II that had mass-

group service sets, and this could suggest that more formally elaborate eating and drinking events were activities restricted to the Central Enclosure's residents. If so, it surely would have been these 'behaviours' to which Well 4's five Albuicus-stamped cups and four dishes related. They might represent a shop consignment, with shop deposits elsewhere identified based on the quantity and 'freshness' of their same form-type vessels (pre-Boudican Colchester: Crummy 1997, 82–3 and Hull 1958; see also Detsicas 1968 on a mass samian deposit from Springhead, Kent that was first thought to be shop-related but then dismissed on the grounds of its wide date-range). Yet, as stressed in [Chapter Three](#), if that is what Well 4 represented, then surely it would have also included locally produced wares along with its imports. Given this, it seems more probable that its samian reflects the best tableware of a higher status household, possibly newly acquired so that they had not yet suffered use-breakage and admixture. This does not, though, mean that the deposit was any less extraordinary (nor readily explicable), especially its 11 Albuicus-stamped vessels. By way of comparison, of the 223 stamped vessels amid the almost 4500 samian vessel-forms recovered from London's St Magnus House waterfront excavations, the highest same-stamp frequency was only eight (Bird 1986; see also Rhodes 1986); these were thought essentially to relate to shipping consignments. All this raises the possibility that the household represented in Well 4, at least when acquiring the Albuicus vessels, might have received its samian by direct import and not, for example, *via* Londinium's shop-stocks.

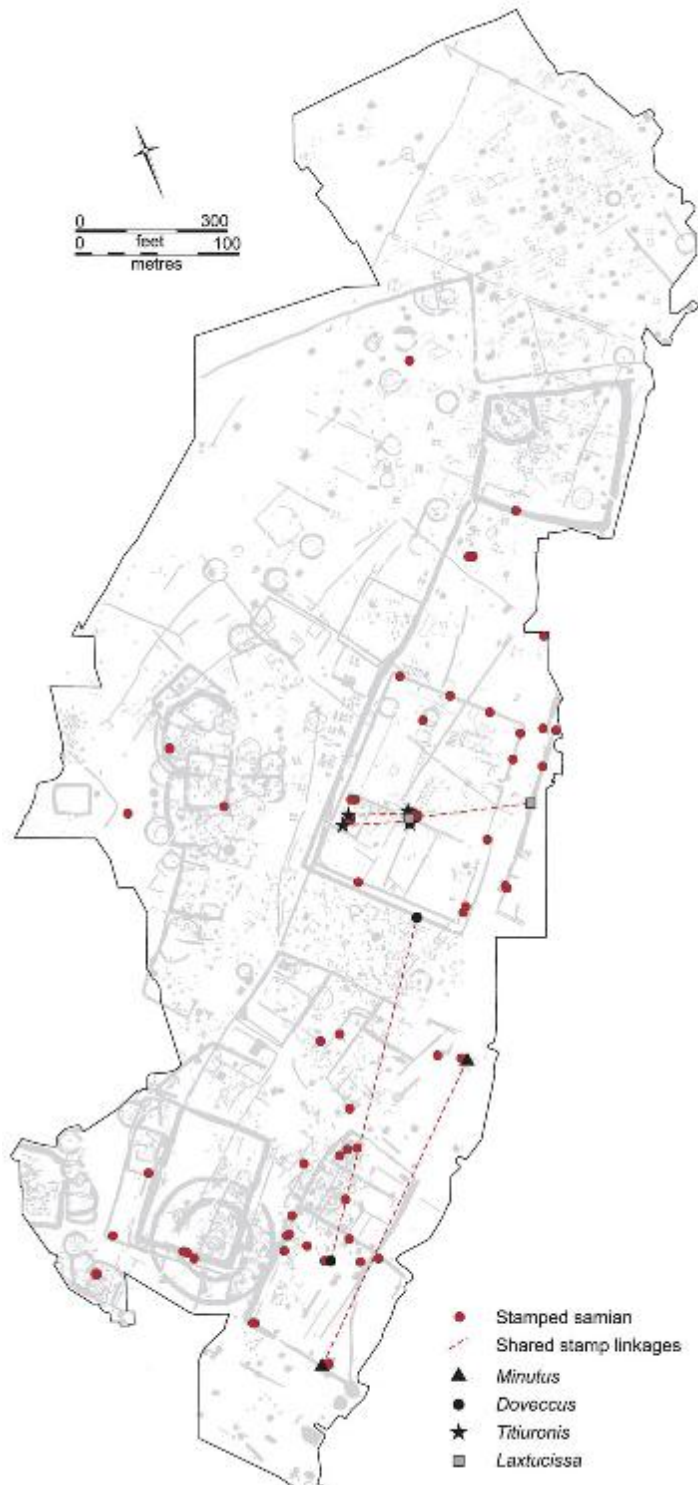


Figure 5.12. Samian stamp linkages, distribution of stamped sherds with 'distant' cross-site shared-stamp locations separately indicated.

Of course, in order to fully appreciate the nature of table service attested to in Well 4's assemblage – and by extension the structure from which it derived – the many bronze vessels that were evidently also present must be taken into account. These were obviously severely damaged by the fire and survived only as fragments, but appear to have included a possible decorated piece and a strainer (see Appleby, [Chap. 3](#)). It only seems reasonable to consider these as resonating with the face-decorated copper alloy ewer or jug handle recovered from the Central Enclosure's ditch ([Fig. 5.14](#); Cat. No. 416; see Prehistory Vol., [fig. 4.72](#) for Margaret Jones' finds notebook comments on this piece).

Economic Basis

Due to the paucity of the processed environmental samples, it is unfortunately impossible to detail the site's crop production. By the size of its quern assemblage – some of whose pieces are sufficiently large to have required operation by traction – and the presence of Structure 1's granary, there can be no doubt that the settlement's arable component was intense. Based on its distinct construction technique, that structure is amongst the most readily interpretable of the site's building remains. It had a footprint-area of c. 38.25m (though it is likely that its floor extended beyond its footings) and it would be reasonable to assume that it had a storage capacity of at least 76.5 cubic metres. Leaving aside any other possible contemporary grain storage facilities (e.g. in the aisled barn or four-posters), this certainly represents significant storage. Using Gorhambury's figures (Neal *et al.* 1990, 25–6, see also appendix 2), and as employed in the Prehistory Volume ([chap. 5](#)), admittedly this would only be the equivalent of roughly half of that of the site's later Iron Age 'Granary Row' posters (see [Fig. 5.15](#)). It would, nevertheless, equate to the yields from some 300ha of land and be sufficient to feed 50–75 extended families. Surely a much higher population than would have then been resident on the terrace, this attests to centralised grain storage and, probably, its off-site export.



CREMATION 902



CREMATION 903

Figure 5.13. Pottery sets: Cremations 902 and 903.

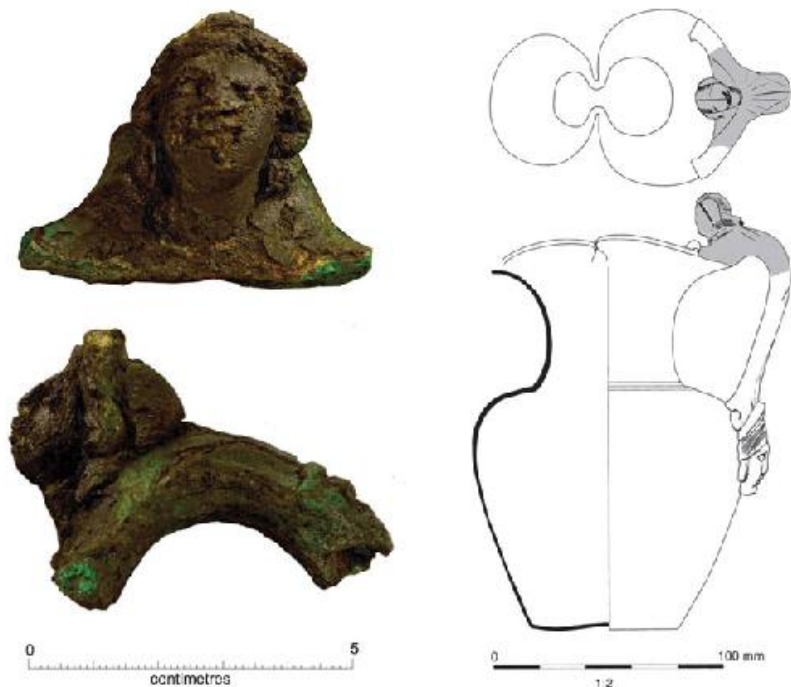


Figure 5.14. Elite goods: Mucking's face-decorated flagon/ewer handle shown as reconstructed (on ewer from HS1, Site D's Grave 6260: Allen et al. 2012, fig. 414, 341–2); below, Cremation 902's eagle-headed finial.

In Phase 2 there is evidence of brewing activity. 'Corn-driers' 3 and 4 have been clearly demonstrated to relate to beer production, as demonstrated by the

botanical remains analysed by van der Veen (see [Chap. 3](#)). These were derived from a probable destruction layer within CD3 (fired clay debris separated from the compacted clay floor by a thin band of charcoal; several long pieces of burnt wood were removed from this upper layer, which overlay the substantial spreads of charred cereal). It appears that this structure burnt down during what turned out to be its final production cycle. The cereal was identified largely as spelt wheat, with at least 1000 germinated grains present, though some weed remains were also present. This evidence is interpreted as representing the remains of deliberate germination. After the grain is soaked in water, it is spread out on a floor to germinate; this process is then arrested by roasting the grain in order to produce the malt (see van der Veen, [Chap. 3](#); Morris 1979, 16). The remains from CD3 thus seem to represent this last stage, with the destruction layer indicating that the structure caught fire during the final heating of the grain and was thereby destroyed. The insertion of a complete inverted samian bowl (a Drag 31 stamped Minutus) at the end of the flue may suggest a ritualised attempt to ‘close’ the structure, perhaps to avert further destruction, during the later second or third century AD ([Fig. 2.45](#)).

Table 5.9. Stamped samian frequencies.

Name	Bowl	Cup	Dish	Platter	Unknown	Vessel Count	No of Sherds
Aenisatus		1				1	1
Aestivus			1			1	1
Albucius	1	5	4		1	11	30
Ammius			1			1	1
Aticiso		1				1	1
Avitus			1			1	1
Banoluccus		2				2	4
Calvus		1				1	1
Cintugnatus			1			1	1
Cracuna		1				1	1
Criciro			1			1	1
Cunopectus		1				1	1
Decmus			1			1	1
Doccalus			1			1	2
Do(v)eccus			1	1		2	2
Favvo				1		1	2
Giamatus		1				1	1
Glosabinia			1			1	1
Iulius		1				1	1
Iustus			1			1	1
Lallo		1				1	1
Laxtucissa	1		1			2	4
Licinus		1				1	1
Lillutius			1			1	1
Magnus			1			1	1
Mainina		1				1	1
Malluro			1			1	1
Maximus		1				1	1
Mercator			2			2	2
Minutus			2			2	2
Murranus			1			1	1
Musicus			1			1	1
Muxtullus		1				1	1
Nicephor			1			1	2
Paulianus			1			1	1
Paullus			1			1	1
Quintilianus	1					1	17
Reburus		2				2	2
Remicus		1				1	1
Saturninus			1			1	1
Senila		1				1	1
Tituronis		1	3			4	4
Vagiro			2			2	2
Vegetus			2			2	2
Unidentified						10	10
TOTAL	3	24	35	2		75	117

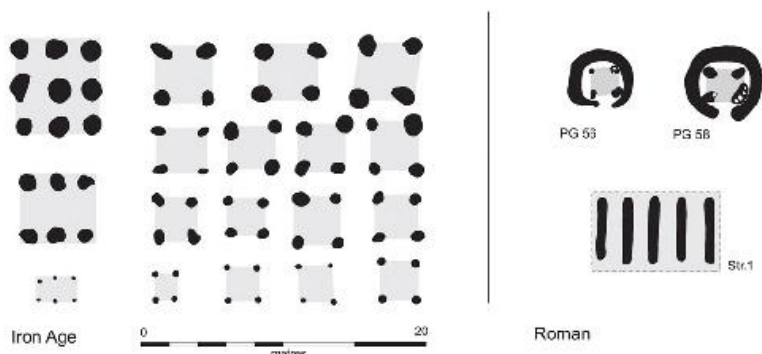
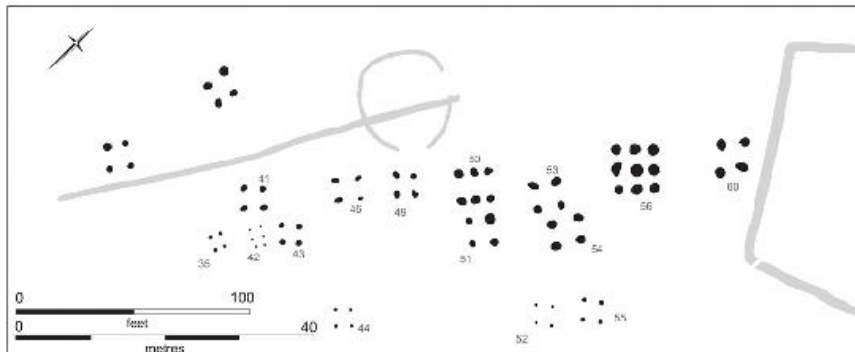


Figure 5.15. Grain capacity: top, plan of later Iron Age Granary Row and, below, the collective ground-plan of its posters compared with the Romano-British granary (Structure 1) and Structure 9's aisled barn.

Both this malting floor and its predecessor seem to have been associated with the Phase 2 occupation. They were located in the south of the site, where the operational wells and the grey ware kilns were also situated; this seems to have been the craft and agricultural focus of the site in this phase. These can be compared with, for example, similar structures identified at the later Roman farmstead at Orton Hall Farm (Fig. 2.49; Mackreth 1996). The five 'drier' structures here were interpreted as part of the brewing facilities at the site (other elements included 'vats' for steeping the grain before germination in the drier).

These were situated in barns at Orton Hall Farm (and dated to the later Roman period), with a water supply from a well nearby. It is possible that a similar situation was seen at Mucking in the case of ‘Corn-driers’ 3 and 4. They were certainly close to Well 8, from which the essential water could have been drawn. It is conceivable that they lay within a barn or other structure. The surrounding area of brickearth was largely unexcavated, and had been heavily disturbed and compacted by the metalling of the quarry access road. It is, therefore, likely that associated structural features, such as postholes or beam-slots, or features associated with vat bases, remained unidentified. Not enough of the structures’ components survived to make any further interpretation of how these driers were operated, but they would have been an integral part of the site’s beer production process for the site. Their size and rarity does not suggest, however, anything approaching industrial capacity; unlike sites such as Hambleden, possibly a military-run supply farm (Morris 1979, 19), they appear to have been used for beer production at a more immediate site-based level.

What do the faunal remains suggest? Basic analysis of those from Romano-British features (see Seetah & Done, [Chap. 3](#)) suggests that cattle were then the predominant meat-bearing species, with sheep/goat a secondary species, and more minor elements of pig and horse (butchery marks on which suggest that the latter may have been used as a food source). There was also some exploitation of wild species. While the coastal marshes of Essex are argued to have seen intensification of sheep-rearing from the late third

century AD (Sealey 1995, 77), this does not seem to be relevant to the species distribution seen at Mucking, as the site appears to have been in less intensive use by this point.

This predominance of cattle perhaps represents yet another aspect of continuity of economic practice from the later Iron Age, while the keeping of sheep or goats for milk, wool, skins and meat within a mixed farming regime is typical of rural Romano-British sites (Morris 1979, 50). Evidence for textile production on the site is, however, sparse. While a number of spindlewhorls were fashioned from Romano-British pot sherds, this is a characteristic Anglo-Saxon type (seen at West Stow and elsewhere; West 1985). The contexts from which these derived were typically the upper fills of ditches that saw a mixture of later Roman and Early Anglo-Saxon pottery within them (see [Chap. 3](#) and below), and it is likely that they were manufactured in the latter period. Nevertheless, sheep at Mucking were used for their meat, as well as probably their wool, and goat horn cores were also recovered. The smaller enclosures in the Southern Enclosure system, as well as the more curvilinear compounds of the Western Enclosures may have served as sheepfolds, providing night-time protection for flocks that were kept in open pasture during the day.

Cheese seems to have been produced at the site, to judge by the presence of 'cheese-press' fragments: vessels with pre-firing perforations in the base. The distribution of these is interesting. Although only five were identified from the site, they were all in second to third-century forms, and were all recovered from the

Southern Enclosure-area. The milk for processing may equally have come from cattle, sheep or goats; all are evinced in the bone assemblage.

Indeed, the very laying out of the various ditched enclosure systems seem to have been with control of animals in mind. Certainly the Central Enclosure, with large open spaces and formal structures, seems to have been coherently ditched, not in a heavily defended manner, but in a way that would serve to keep animals out; entrance would have been through a gated structure on the eastern side.

Ritual Components

Obviously the most pressing issue here is the manner of use of *The Plaza*-area's fenced 'reserved plot' and if any of the Central Enclosure's structures were associated. There is, unfortunately, little depositional evidence to aid us in this. Other shrines are often distinguished by their enclosure – monumental or otherwise – and by the distribution of associated material culture, especially animal bone (with a significant proportion of wild animals) representing sacrifice and/or ritual feasting, personal ornaments and votive objects (e.g. Higham Ferrers: Lawrence & Smith 2009). This bears little resemblance to the artefact patterning from Mucking, although the general lack of surface investigation may have obscured such distributions.

In [Chapter Two](#), the affinities of Structure 7's apsidal-ended building to the arrangement of the fourth-century AD temple compound at Ivy Chimneys (Turner 1999) was raised. While always possible, this seems an unlikely function for Structure 7 based on its (admittedly inferential) association with Well 4's closing deposit, which seems to have essentially been domestic. The possibility that Well 4 was actually some manner of ritual shaft has been fully considered. Here, a sense of comparable context or 'measure' is provided by the 4.5m-deep shaft within the

Springhead ritual complex/sanctuary in Kent's Ebbsfleet Valley, dating to the second century AD (Andrews *et al.* 2011, 80–2, fig. 2.55). While the illustrated sections of the two seem broadly comparable, the shaft lacked Well 4's timber lining and, aside from a human skull, its fills were distinguished by animal bone deposits (including complete skeletons and birds; see Grimm 2010); in other words, it seems of an entirely different character to Mucking's Well 4.

With regard to the Central Enclosure's fenced plot itself, fence-lines were also a component of the Springhead complex (Andrews *et al.* 2011, fig. 2.28), but perhaps the closest regional parallel – but still only generic – is the shrine at the roadside settlement at Westhawk Farm, Ashford, Kent (Booth 2001). There, a posthole setting of polygonal plan (with further posts and a pit within its interior) lay with a c. 27 x 31m ditched rectangle. Appearing singularly 'un-monumental' (see also Evans & Hodder 2006 concerning the Haddenham's Snow's Farm shrine's timber settings and mass animal bone deposits), deposition does not seem to have played a major role within its activities; it lay beside an large area of 'open ground' within the centre of the settlement, the latter possibly a place of gathering (Millett 2007, 164–5).

What does seem significant, but essentially inexplicable, concerning the Central Enclosure's fenced plot is the manner in which its pair of contemporary structures opened flush with its eastern side. The first two roundhouses (PGs 68 & 73) have been assigned to the complex's Conquest Period

layout, but their dating evidence is such that any close attribution is impossible. Succeeding the southern of these (PG68) was Structure 8's pair of parallel beam-slots, which could conceivably have been some kind of small shrine; again, though, this would be without accompanying deposition. We are, however, on firmer grounds with the northern secondary/replacement building (PG71). As an eavesgully-surrounded roundhouse, a considerable quantity of finds was associated (e.g. some 580 pottery sherds), with its infilling dating to before the end of the second century. As outlined in [Chapter Two](#), its assemblage had both samian and amphorae (10 and three sherds respectively) and there would be no reason to see this as some 'humble' abode (it also included vessel-glass shards). Nor would there be any basis to assign it anything other than a domestic function – despite its specific fenced plot relationship – and, in the end, one can only speculate that it might have housed some manner of 'keeper' or priest.

The possible small shrine setting in the Western Enclosures, PG75/76, deserves mention. There are also the three fragments of pipeclay figurine, which are certainly intriguing and suggest religious activity. While the Mars figure from the 'Enigma' pit remains unparalleled, the Venus fragment (plus another unidentified) from the upper fills of Well 2 is of a type known elsewhere in Essex, with finds from Colchester, Canvey Island (100+ examples; R. Jefferies pers. comm.), Gestingthorpe, Wickford and Orsett 'Cock' (Jenkins 1998). These have been found in association with religious complexes on the Continent and in Kent, though the Essex finds seem primarily to be later

deposits within non-religious contexts; these figurines were produced in Central Gaul during the second century.

The deposition of complete vessels could also perhaps be an indication of ritualised activity (although more prosaic explanations are also possible). Searching in the pottery database for whole vessels (i.e. rim of 1 EVE and vessel part as profile), produced a single samian vessel (Cat. 740) and a complete Drag 27 of Flavian date; the latter occurring in Level 2 of the eastern side of the Central Enclosure ditch A1A. Other whole vessels comprised those in the bottom of Well 1, a flagon in an internal ditch of RBI, a transitional grey ware dish in the northern ditch of the Central Enclosure, a grey ware jar in the chamber of Kiln 3, and a grog-tempered beaker from areaclearing close to GH45. While the Kiln 3 find may represent production waste, and the GH45 instance either potential curation or a disturbed burial find, the other finds, as argued for Well 1 and the corndriers above, may represent deliberate deposition of whole vessels as either opening or closing deposits for ditches and other features.

The main evidence for ritual activity at Mucking, however, obviously comes in the form of the cemeteries and isolated burials, and we will now turn to these.

Interrelating Cemeteries and Settlement

How do Mucking's Romano-British cemeteries compare to those at contemporary sites? While John Collis saw scattered burial throughout rural settlements as the predicted norm (1977), it is now evident that cemetery enclosures, and the longevity of reserved burial areas, were also common. Larger Romano-British centres – both rural and urban –

are often 'ringed' by cemeteries in the same way as Mucking, with Baldock (Burleigh 1993), Great Chesterford (Medlycott 2011) and Broughton (Atkins *et al.* 2014) being good examples. In addition, smaller urban and rural sites often display a pattern of 'backplot' burials (Philpott 1993b). Enclosure in preexisting features is common (both for earlier and later cemeteries), as is insertion of burials into boundary ditches (Pearce 1999). Apparent from a range of other sites is a comparable amount of variation to that seen here at Mucking. This should be seen as the norm for the bulk of Romano-British burial practice, with the 'managed' (and typically urban) cemeteries of the fourth century being seen as a late aberration (although one that has come to dominate the archaeological literature). Even in earlier urban cemeteries, a range of burial practices were seen; it is only in the fourth century that much of the patterning (including a variety of orientation) disappears, to be replaced by west-east burial, often in organised rows. It should be noted that the oft-cited burial laws, prohibiting intramural burial, do not seem to apply to settlements ranking below *civitas capitals* (R. Reece pers. comm.).

Mucking was obviously a smaller centre than, for example, the contemporary settlement at Baldock, Hertfordshire (Burleigh 1993); this major rural centre (perhaps with a religious function) extended to about 40 hectares in the first and second centuries AD (more than twice the area of Roman Mucking), and its size is reflected in its cemeteries. The major cemetery at Walls Field had 320 excavated cremation burials (with many more disturbed) and around 68 later third- and fourth-century inhumations (Westell 1931). Two further cemeteries were discovered during excavations on the settlement in 1968–72 (Stead & Rigby 1986) and there have been extensive excavations in a further three cemeteries since 1980 (Burleigh 1993, 43), with many isolated burial groups and individual burials both within and outside the settlement-area. The largest, at Royston Road, has produced at least 520 cremations and around 200 inhumations, with many

more present. The cremations dated from the first century BC to the late third century AD. Of these, 195 were urned and most cremations were placed in shallow pits, sometimes with pyre debris, pyregoods and grave-goods. Some appear to have been in simple wooden boxes. The cemetery at Wallington Road is of a similar date range (*ibid.*, 47; Burleigh & Fitzpatrick-Matthews 2010), although the majority of the 180 cremations were urned, and there all the inhumations dated from the late first century BC to the later first century AD. In all, nearly 2000 burials are known from Baldock's cemeteries.

Useful parallels for individual cemeteries at Mucking have been forthcoming from other sites. A close one for the inhumations from Cemetery I is seen, for example, in Essex at Chignall, to the south of its Roman villa (Clarke 1998, 51–63). There, 25 shallow graves dating from c. AD 275–350+ were excavated in the corner of an enclosure. The rites displayed a similar variability to Mucking: four contained hobnailed footwear, eight were in nailed coffins and five were decapitated (these thought to be late in the sequence). Grave-goods were more minimal than at Mucking: single pottery vessels in three graves, plus solitary examples of a knife, a bracelet and a glass cup. Almost all were supine, extended burials, and just one was flexed. Both adults and children were present, and orientation seemed largely to be determined by the surrounding ditch. This cemetery was interpreted as the burial ground for two or three families of *coloni* – tenant cultivators – over two or three generations (*ibid.*, 140), and it was thought likely that other groups of *coloni* had their own cemeteries elsewhere

on the estate.

The cemeteries of the 'small town' at Kelvedon in Essex can also be compared (Rodwell 1988). That at Site J is the best documented (*ibid.*, 26–52; see Prehistory Vol., fig. 5.38), with 60 inhumations and 35 excavated cremations (others having been lost). The inhumations dated from the later second to the later fourth century and the cremations from the later first to the later fourth century. Half of the inhumations were unfurnished; 13 contained hobnailed footwear, seven had items of jewellery, with 13 having pottery vessels. Burials in nailed coffins were dated to before the mid fourth century. Both cremations and inhumations employed damaged vessels and 'seconds' as gravegoods, with the cemetery interpreted as having been in use by a limited number of people over an extended period of time.

Smaller rural settlements have also produced comparative cemetery data. Recent excavations at Strood Hall in Essex revealed an Early Roman cremation cemetery in its own enclosure off a rectilinear settlement, with 27 cremations and a single inhumation, all dated to the first to mid second century AD (Timby *et al.* 2007, 117–38). The various cremation cemetery groups at Broughton, of a similar date range, were generally within ditched enclosures (Atkins *et al.* 2014). These both display similar attributes to Mucking's early cremations: the use of cremation urns and accessory vessels, occasional early inhumation, some redeposition of pyre debris, and occasional grave-goods such as brooches (and also toilet implements at Strood Hall). The Strood Hall settlement was interpreted as being of fairly low

status, producing a near-complete plan of a farmstead (*ibid.*, 140), while a similar social status has been assigned to the two farmsteads at Broughton (Atkins *et al.* 2014, 366). Also of broadly comparable date, relating to the Stansted Airport's settlements were the 57 cremations (62 individuals in total) in two main areas of the site (Havis & Brooks 2004, 189, fig. 129; Cooke *et al.* 2008, 131–40). There, two very rich burials of the early to mid second century stand out from the rest of the more simply furnished graves, with one – Cremation 25 – having a bronze amphora, decorated patera, bath saucer and decorated trefoil jug, as well as also fine glass vessels and pottery (Havis & Brooks 2004, 216–17). As at Mucking, there appears to be a difference in status between the burial areas at Stansted, with jars dominating the pottery accessory vessels in the MTCP site, while the majority of cups were recovered from the DCS/DFS sites (Cooke *et al.* 2008, 148).

While the layout of Mucking's Cemetery II would appear close to that of HS1 Site D's northwestern cemetery (Allen *et al.* 2012, 354, fig. 4.22), none of Mucking's burials saw the same level of grave-goods as the richest burials there (e.g. Grave 6635 having a bronze ewer, patera and cosmetic box; *ibid.*, 354–73 and see also Grave 6260 on another part of the site: *ibid.*, 325–54).

At Mucking, while there were certainly markedly higher status burials, they clearly were not of the highest order. As discussed at length in the Prehistory Volume, to some extent this is not unlike the site's Late Iron Age cremations. Yet, in this case, the

evidence of the face-decorated bronze ewer or jug handle recovered from the Central Enclosure attests that the settlement had access to very high quality goods, but for whatever reason they did not feature in its interments. This may have been just a matter of personal/familial choice or selection. It is, however, conceivable that this itself reflects upon the actual status of that complex's leading household and may perhaps even reflect upon whether the wealth arising from that role/office was not held to be entirely personal.

Broader conclusions can now be drawn about the relationship between Mucking's settlement, in its various phases, and the cemeteries. The first is that the dated burial sequence in all probability reflects the settlement sequence in its duration and intensity ([Fig. 4.92](#)). Analysis of the settlement pottery assemblage (above) strongly suggests that the excavated area of the site saw relatively little activity during the fourth century in comparison with the intensity of first- to mid third-century occupation and industrial production (as evidenced by the extensive sequence of pottery kilns). This corresponds well with the sequence of burial: all 45 dateable cremations date to before AD 250, while only a handful of the 31 datable inhumations seem to definitely date to after AD 250. This represents a decline in the rate of burial at Mucking in the later third and fourth centuries, with the majority of burials – both inhumation and cremation – taking place before the mid third century AD.

The second conclusion is that the different burial areas were reserved for different population groups.

These were possibly family or household groups, of varying status. Each of the cemetery areas was in use for a considerable length of time: Cemetery I from the mid first until the fourth century; Cemetery II from the later first to the mid third century (with even earlier Late Iron Age burials perhaps acting as a focus). Cemetery III was possibly more short-lived, with cremation burial taking place from the later first to the late second century, but its inhumations may extend this span. Cemetery IV saw cremation burial take place from the early second to the mid third century, but also saw the site's last Roman burial, that in the stone coffin and dating to the later fourth century (and possibly relating to the site's 'transitional' Romano-Saxon usage; see below). Cemetery V, in contrast, seems to have been fairly short-lived, bridging the Conquest Period.

The more dispersed burial groups display a similarly wide date range. The concentration of different burial practices within distinct cemeteries reinforces this impression. The use of coffined inhumation burial in large numbers in Cemetery Ib, the use of caskets and box cremations in Cemetery II and the northern group, as well as the employment of inverted platters as lids for cremation urns in Cemetery IV, are all good examples of these distinct practices. These cemeteries did not, therefore, appear to be under any kind of centralised control (unlike those urbanised cemeteries where the role of semiprofessional undertakers has been suggested). The dead were interred in appropriate ways for their age, sex and, it is assumed, family roles, occupation and status. What burial types were thought appropriate obviously changed over

time. With the exception of burials in the northern group, generally children under the age of seven years were not buried on their own in cremation burials; if they were present, they accompanied an adult. Children at Mucking could, however, have burials that were elaborately furnished. The isolated casket burial Cremation 1028 was apparently a child of 7–14 years, and the elaborate inhumation Grave 899, with its 11 vessels, vault and nailed coffin, was also apparently of a child. Outside of Cemetery I, inhumation burials with bracelets or bangles all seem to be of children, and may represent a similar response to untimely death.

Yet, how do we account for the fact that a fairly minor rural settlement had so many discrete cemeteries, as well as explain what seems to be the site's cemetery-distinct practices and their varying expression of wealth/status? Do the differences in Mucking's cemeteries reflect, at least in part, something other than just the acceptable range of variability of familial burial traditions? Here, if willing to 'push' the evidence and risk caricature, a labour-/status-based model could be suggested. This would have Cemetery I, on the one hand, providing a measure of 'normal' rural settlement burial rites, presumably for the Southern Enclosures' inhabitants. Cemetery II, on the other hand, was the site's only purposefully ditch-enclosed burial ground and the only one to be located within the settlement's core-area. Sited within the Central Enclosure and having 'samian stamp-links' with Well 4's closing deposit – and thereby being inferentially associated with that enclosure's main residence, Structure 7 – it could be

read as relating to the settlement's higher status inhabitants and their various attendants. This would contrast with the relatively informal layout of Cemeteries III and V, their few grave-goods and a high incidence of males, and which could have largely been for the estate's labourers. Unsurprisingly, the evidence is certainly not at hand in any way to prove such a sweeping scenario, but given the settlement's many components and what must have been diverse inhabitants, it is entirely reasonable to ask such questions of the data.

We can only be tentative in the interpretation of Mucking's cemetery evidence because it is lacking in several aspects. There was little information derived from the cremated human bone, aside from sex in some instances and broad ageing, and certainly modern analyses would derive far more detail from such an assemblage. A modern excavation would also have taken more environmental samples from the cremated fills, and analysed consistently for macrobotanical remains (as recently identified in some quantities at the East Cemetery of Roman London; Barber & Bowsher 2000). Animal bone within the cremated bone deposits would also have been reported on (although any unburnt bone would not have survived the aggressive burial environment at Mucking). A programme of highprecision radiocarbon dating would also probably have been undertaken. More care would also have been taken to distinguish pyre-goods from gravegoods. What we do have, nevertheless, is a nearcomplete settlement plan and its many burials, and that, in itself, is somewhat

remarkable. Given that the excavations finished nearly forty years ago, the burials on the whole were recorded to a high standard (plans, photographs and sections were all well documented, and linked to notebook entries). This has enabled us to do something that is all too rare in Romano-British archaeology: examine a settlement's relationship with its burials through time (see Pearce 1999; Philpott & Reece 1993).

Explaining and Naming Roman Mucking - *An Estate Centre* (+ Village)

When interpreting major sites of the period there eventually comes a desire to name their parts (see e.g. Andrews *et al.* 2011, fig. 4.3; Evans *et al.* 2013, fig. 4.54). Yet Roman Mucking evades ready characterisation. It is certainly more than a farmstead, but does not amount to a 'small town' – being, for example, much smaller than Kelvedon or Heybridge, and lacking, respectively, the one's defences and the other's distinct temple precinct (Fig. 5.16; Atkinson & Preston 1998; Perring & Pitts 2013, 41–4; Medlycott & Atkinson 2013, 78, 81). Using Taylor's fieldwalkingbased criteria, by its 4ha+ size it would have to be considered a 'large nucleated settlement' of some description (2007, 102–4). Applying English Heritage's current terminology (2011), it might rank as a 'village', at least its South Enclosures portion, with this being how, for example, Stansted's Mid-Term Car-Park Site is described (MTCP: Cooke *et al.* 2008; Medlycott & Atkinson 2013, 82). On the whole, though, this would seem too 'domesticated' an appellation to encompass Mucking's many parts.³

In [Chapter Two](#) parallels for the site's Roman period structures were thoroughly explored and this requires no further comment here. While components, especially corn-driers/malting floors and granaries are found on villa estates (e.g. Northfleet, Kent: Andrews *et al.* 2011; Great Holts Farm, Essex: Germany 2003), given the settlement's buildings there seems no reason to think that it involved a villa, as Margaret Jones

always suggested. Quite simply, it lacked the prerequisite complex building ranges and other accompanying ‘hallmarks’ such as a bathhouse. Admittedly, the masonry remains recovered in the southern portion of the site (CD1–4) are suggestive that some manner of major structure(s) may not have been fully realised. Yet, as mentioned above, such ‘driers’ also occur in association with major farms, such as at Orton Hall (Mackreth 1996).

There is no escaping the fact that the layout of the Central Enclosure’s main space is reminiscent of the yards of both the Chignall and Thurnham villas, especially the latter’s large fence-defined open space with its aisled barn tucked into a corner (Booth *et al.* 2011, fig. 5.26, 270–311). In order to attempt a final resolution to this, we can ask whether the site’s ceramic building material suggests the presence of a villa nearby. The excavations within the yards/paddocks just south of Chignall’s villa-range proper (Clarke 1998, 112) yielded 13,176 pieces of roof tile from 10ha of excavation, mostly comprising small fragments, with a total weight of 593.13kg. Similar evidence at Mucking comprised 596 identified *tegulae* (wt. 105.13kg; average 176g) and 355 *imbrices* (40.05kg; average 113g); there were also over 150 *tubuli* (13.25kg) compared to 140 fragments from Chignall (*ibid.*, 113). While the overall numbers at Mucking seem lower, there were also 296.57kg of unidentified pieces, 68kg of scraps and 43.71kg of Roman brick. This total of nearly 570kg of Roman building materials, together with the less fragmented nature of the roof tile strongly suggests the former existence of Romanised buildings nearby. Unlike

Chignall, however, which produced 251kg of *pila* tile, none was recorded from Mucking, and nor were any *tesserae* found. On balance, the building material and other artefactual evidence from Mucking suggests that, although the Central Enclosure appears to have enjoyed a higher social status than the site's other enclosure complexes, it still does not represent the socially elite status of principal residence – in other words, a villa – and it is unlikely that such a residence was immediately adjacent. Its solitary stylus, for example, contrasts with the 17 from Gorhambury (Neal *et al.* 1990, 148) and the 74 from the villa at Hambleden, Bucks (Cocks 1921, 198). Other explanations should probably be sought.

It may be the case that the chronology of the settlement is generally too early for a formal villa structure to have been present in this location. Although there are a number of sites where a villa of middling status is accompanied by one or more farmyards, containing ancillary structures such as workshops, granaries and barns, these tend to be later Roman in date. Examples include Great Holts Farm, Essex (Germany 1993), Gorhambury, Herts (Neal *et al.* 1993); and Roughground Farm Glos. (Allen *et al.* 1993). At Bancroft, Bucks (Williams & Zeepvat 1994) the later Roman villa was preceded by a late first to late second-century aisled house, together with ancillary structures. As Richard Reece has pointed out (pers. comm.), *to want a stone-built villa structure at Mucking is to want one in the wrong place at the wrong time.*

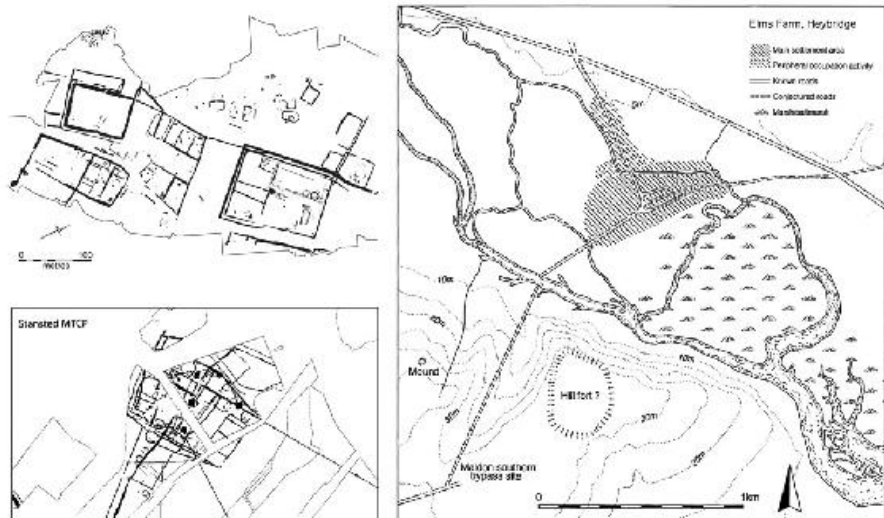


Figure 5.16. Gauging settlement, Mucking compared to the Heybridge and Stansted MTCP settlements (after Medlycott & Atkinson 2013, figs 5 & 6).

Not fitting a villa category does not, though, itself diminish the special character of Roman Mucking. In addition to its major pottery industry, the settlement clearly involved intense agricultural production/storage. To be added to this is the elevated status of its leading household – arguably Structure 7 – as reflected in Cemetery II’s main burials and Well 4’s extraordinary burnt assemblage, with the latter having table-service provision for some 40 people at one time. Focused upon the Central Enclosure (aside from the site’s potteries), Roman Mucking, of course, involved other components. Nonetheless, it is the Central Enclosure’s activities/expression that most clearly characterise the settlement as a whole and which, therefore, require explanation.

Appraising Mucking’s long-term development, in the Prehistory Volume the evidence of its Romanperiod environs is summarised. Based on aerial photography

(Ingle & Saunders 2011) and other excavations within the area, while the area's settlement was then certainly widespread, it does not seem particularly distinguished apart from the frequency of pottery kilns (see above). That said, the scale of what is known to be the largely later Roman salt industry at Stanford Wharf, alongside the Thames immediately below Mucking's terrace (Fig. 5.17; Biddulph *et al.* 2012), now highlights the locale's resource base. Indeed, viewed in the long-term and put boldly, *it was Mucking's proximity to the river and its marshes that 'explains' its sequence as a whole.*

As discussed in [Chapter One](#), not only was this a matter of the site's unique viewsheds down the river (plus the nearby ford at Tilbury), but its access to/control of salt production (from the Late Bronze Age onwards), and probably seasonal pasture, that instigated Mucking's high settlement densities, which thereafter seem to have been sustained until later Roman times. This first had expression in the terrace's two Ringwork enclosures and then its square barrowflanked Plaza complex during the later Iron Age. With Middle Iron Age salt production also apparently occurring at the Stanford Wharf Site, there were hints of related activity at the terrace's North Enclosure and salt may well have then also been a factor. Yet, as witnessed in the extraordinary 'Granary Row' storage facilities flanking The Plaza's northwestern side, grain and river transport seem to have been its main 'drivers'. During the Late Iron Age the site may have even amounted to a cross-channel depot for the exportation of grain to Gaul, with its enormous level of grain storage and a Gallic

connection documented for its square barrow arrays. With such long-distance linkages attested to, if we add to this the evidence of what seems to be the site's 'Belgic' pottery production, then essentially *it is Mucking's Late Iron Age that 'explains' its Roman.*

Seen in this perspective, and with the site having unequivocal evidence of Iron Age/Roman continuity, it seems plausible to consider the settlement as some form of *estate centre*, with its Structure 7 household's 'overseer' assuming the role previously performed by its Late Iron Age hierarchy (if possibly then in cliented relationship to either Camulodunum or even Gaul). The transition this involved might account for what seems to be the evidence of a limited short-lived military presence and could accord with its quasi-'official'/state sponsorship as could be inferred from its seal-boxes, *etc.* The off-site exportation of pottery and grain could have been facilitated by the postulated road-end jetty facilities that may have lain adjacent to the Walton Hall's 'bite' (Fig. 1.18) and, thereby, given access to the Thames and long-distance trade. In the light of the non-villa arguments offered above, this 'official estate' scenario might also account for the decline of Mucking's settlement during the third century. Rather than seeking recourse in agricultural soil exhaustion or the like, the role that Mucking had fulfilled may simply have been superseded by major private villa estates.

Together Mucking and Stanford Wharf, with evidence of estuarine marsh exploitation and riverine-sea access, would have had broad similarities with Heybridge. Yet, whereas the latter has essentially been defined as a 'consumer centre' (e.g. Perring & Pitts

2013, 43), Mucking/Stanford Wharf would surely have to be seen primarily as productionbased. True, Mucking would have variously been under local elite/'overseer' control, but it generally enjoyed a much lower level of imports and wealth than Heybridge.

The role of exports from Mucking also needs to be considered, particularly the shipping of pottery to the North (Fig. 5.18). While some of this may have related to salt production and export, it is clear that a wider range of Mucking pottery was being used on Hadrian's Wall well into the third century AD, and there are implications for Mucking's administrative arrangements.

What has thus far been offered here is surely too simplistic a reading of Mucking's Roman sequence and ignores much. In its primary phase, the Western Enclosures-area was mainly an industrial quarter (pottery and possibly ironworking), but may have seen a degree of religious activity – as possibly expressed in PG75/76's shrine – as well as grain storage (PGs 56 & 58). Given this, it might well be the case that a degree of settlement there *per se* has gone unidentified.

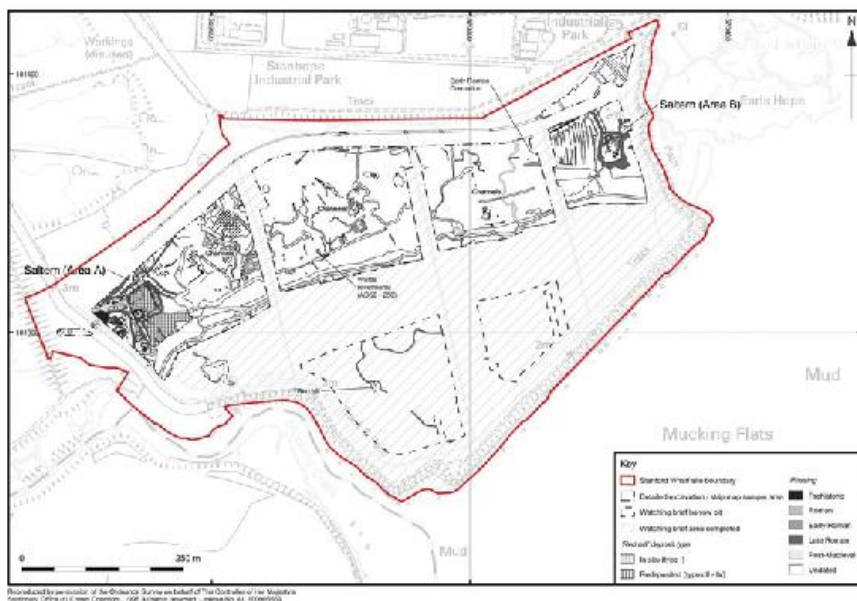
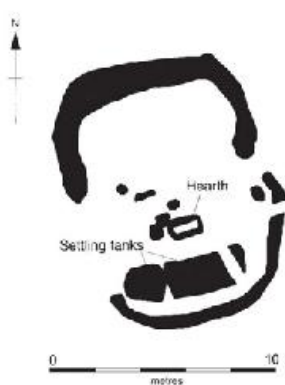


Figure 5.17. Oxford Archaeology's Stanford Wharf Site: bottom base-plan (see Fig. 1.10 for location) and, upper left, Saltern 5808; hearth in Saltern 6090 (upper right; from Biddulph et al. 2012).

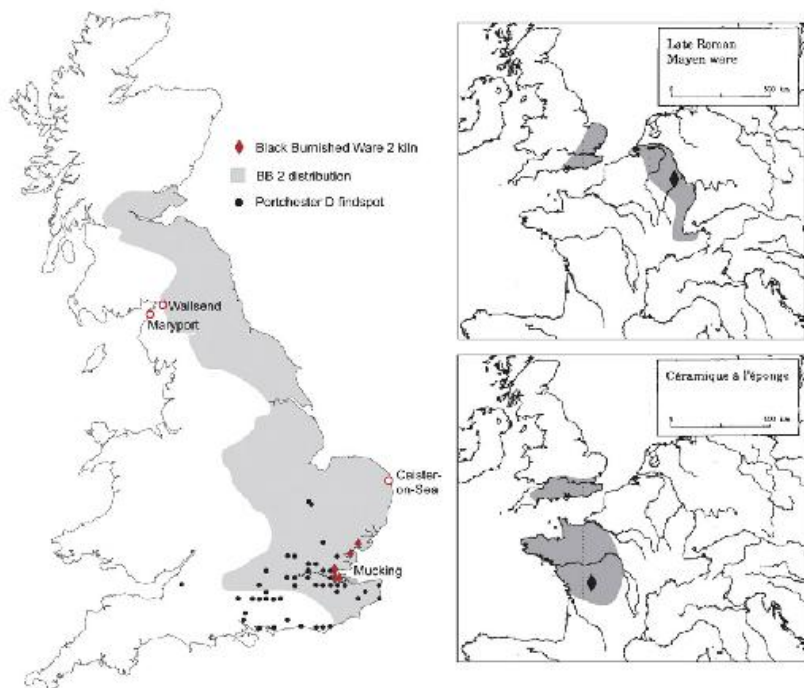


Figure 5.18. Nationwide distribution of BB2 wares (and kilns) and Portchester D pottery (left); right, distribution of Late Roman *céramique à l'éponge* and Mayen pottery (after Tyers 1996, figs. 162 & 175).

Even more pressing is the nature of the Southern Enclosures. Evidently seeing occupation/usage throughout the three phases of the Roman settlement, much of its archaeology was clearly lost due to the degree of its quarry damage, and the complexity of its sequence has not been fully realised. It also hosted considerable industrial activity, with 12 pottery kilns located within its axes. In addition, it saw much more intense settlement than the Central Enclosure and, as highlighted in [Chapter Two](#), in many respects a building like Structure 10 there might well have been comparable to the latter enclosure's Structure 7. Admittedly, the Southern Enclosures were without a Well 4 equivalent: a singular deposit speaking so clearly of its inhabitants' status and 'connections'. Yet,

it was actually from that area that the site's two seal-boxes and its intaglio ring derived, which might also attest to some 'authority'. As outlined in the preceding section, few of the site's burials could be definitely identified as later Roman. They include, however, an adult inhumation in Cemetery I with multiple bracelets/armlets (Grave 52) and, of course, Cemetery IV's stone coffin burial of an adult male; both suggest individuals of some status.

Attempting, therefore, to caricature the Southern Enclosures, they are probably best thought of as a *village*. Telling of the 'resilience of the domestic', it is surely relevant that settlement continued there after it had effectively ceased within the Central Enclosure. A degree of locational pragmatism might have been involved in this, as the interface between the terrace's brickearth and gravels lay along its eastern margin, where the majority of the site's wells were located (1–3, 5, 7 & 8; see [Fig. 1.17](#)). The crucial role of regular water supply for settlement cannot be overestimated. Indeed, as will be demonstrated in this chapter's final section, it would appear that the site's terminal-phase Roman settlement clustered around the area of Wells 1–3, with the Anglo-Saxon material recovered from Numbers 7 and 8 raising questions concerning their possible functional longevity (see, though, Note 5 below).

It is appropriate to consider here why the wider settlement's 'monumental' well – the Central Enclosure's Well 4 – was backfilled with burnt debris, thought to relate to the destruction of Structure 7 nearby. Given the enormous effort (and risk) that

well's deep construction would have entailed, it is inexplicable why it would then have been so formally and abruptly closed. It can only be presumed that, for whatever reason, the actual clearance of the enclosure's ground was itself held to be of major importance.

Finally, the marked stand-off between the Central and Southern Enclosures deserves emphasis. Not apparently seeing any Roman-phase activity within it – at least any that was feature-based – it was into this 'dead space' that the main Anglo-Saxon cemetery was later inserted (No. II; see, though, below). The same can also be said of the industrial activities in the Central Enclosure and the Western Enclosures, as the two did not overlap. All this expresses a formality of layout and distinctly zoned functions: arranged around the estate centre's core (the Central Enclosure) was an early industrial quarter (Western Enclosures) and the more village-like Southern Enclosures, with the latter having both industry and a significant residential capacity. Taken as a whole, *this was very much a componented place/complex*; it was its respective parts that fostered its many cemeteries, whose diverse rites reflect the variability and roles of the settlement's evidently 'mixed' participants.

Transitions (II) - Roman/Anglo-Saxon (Phase 4)

Though there was a degree of burial activity within RB Cemetery I (plus the later fourth-century stone coffin burial inserted into RB Cemetery IV), it seems unlikely that the excavated area at Mucking saw intensive settlement after the mid third century AD.

As fully outlined in [Chapter Three](#)'s Discussion, the limited amount of later Roman pottery and other dateable evidence from the site at that time would certainly point to a marked decline. Moreover, the Late(st) Roman material would actually seem to relate to Anglo-Saxon activity within its southeastern quarter.

Foreman and Maynard (2002) have argued that this late phase of settlement comes after a period when the gravel terraces of the Thurrock area saw far less intense settlement than during the later Iron Age and Early Roman period. They pointed to the general lack of direct evidence for Late Roman activity, with the exception perhaps of the Orsett 'Cock' enclosure (Carter 1998), and now the Stanford Wharf salt production site (Biddulph *et al.* 2012): "it is difficult to escape the conclusion that a genuine population shift, away from prehistoric river terrace settlement sites, occurred during the Early Roman period" (Foreman & Maynard 2002, 153). This is not thought to mark a generalised depopulation, but localised population movements towards expanding urban and protourban nuclei taking place over a long period of time. There is also evidence now from the Kent side of the Thames Estuary that occupation declined during third and fourth centuries (Millett 2007, 183–4), and there mid to later Roman sunken-featured/floored buildings have been recovered at Springhead and Mockton (Andrews *et al.* 2011; Bennett *et al.* 2008).⁴

Initial interpretations of Mucking's Anglo-Saxon settlement, such as those of Margaret Jones and Vera Evison, suggested a very early start date for the occupation and burial sequence, even as early as the

late fourth century, based on the presence of late Roman military belt-fittings in both graves and settlement features (as well as chronologically early brooch and pottery types). However, in line with chronologies then being put forward for most other Early Anglo-Saxon settlements, subsequent authors settled on a later start date around the middle of the fifth century. This is something that has now been more clearly addressed by Hirst and Clark's recent publication of the site's Anglo-Saxon cemeteries (2009), where a small number of graves are clearly assigned to the early to mid fifth century. The most convincing examples are the two graves with Late Roman military belt-sets, Grave 117 in AS Cemetery I and Grave 979 in AS Cemetery II. The latter also contained an early type of spearhead and a penannular brooch worn singly on the chest; the same grave-goods also occurred with Grave 789, which is also thought to date to this very early phase. Within the female-associated graves were a small number which could also date to the very early fifth century: Grave 100 in Cemetery I, with an early brooch form, and Graves 875, 987 and 989 in Cemetery II, all of which have either early brooch and/or buckle forms; Grave 631 with its bracelet assemblage and Grave 823 with its belt set would also not look out of place in this early group, and nor would Grave 610, with a complete later Romano-British vessel alongside its more typical fifth-century assemblage. The two cremations with zoomorphic bone combs – Cremations 813 and 945 – and one of those with a needle (Cremation 519), may well also be of this date. Obviously several of the less well furnished

inhumation and cremation graves could also belong to this phase, but cannot be confidently assigned using the grave-goods alone; unfurnished Grave 986, for example, is cut by Grave 987 and must pre-date it.

It is interesting that faceted carinated pottery was not used for cremations, as there are several examples of this in early phases at Spong Hill, but that it seems to be largely restricted to settlement features (Hamerow 1993, 314), although one was found as an accessory vessel in Grave 989. Given that the earliest phased burials at Anglo-Saxon Mucking are inhumations, could it be that cremation is a slightly later burial practice here and might this account for the greater incidence of bossed pottery within them?

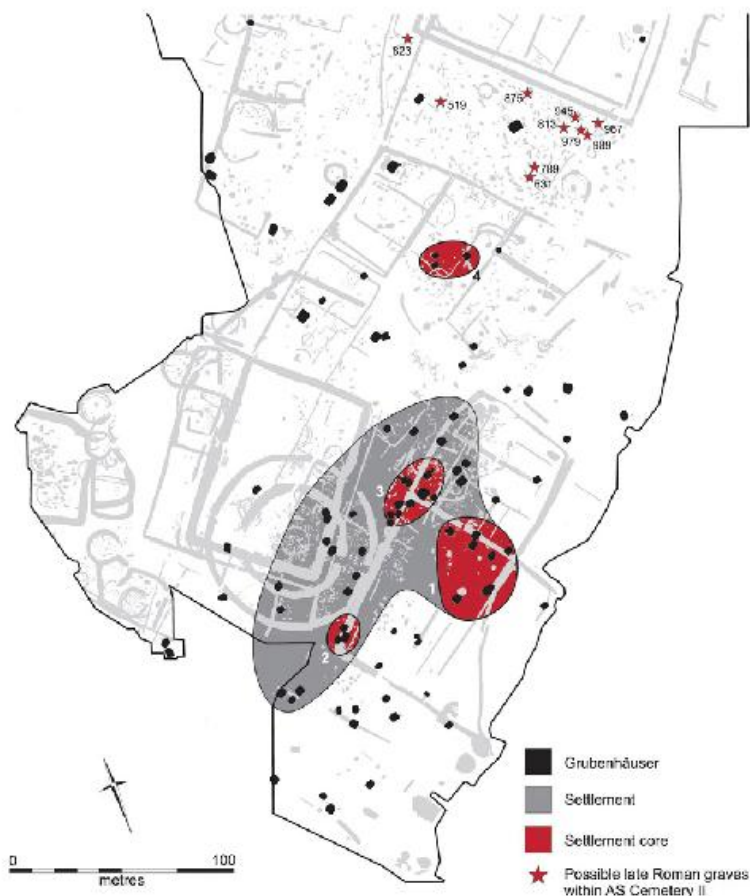


Figure 5.19. The Phase 4 transitional settlement (below) and, above, possible Late Roman graves in Anglo-Saxon Cemetery II.

Taken together with the revised chronology for the major cremation cemetery at Spong Hill (Hills & Lucy 2013), which has clearly demonstrated a burial sequence at that site starting in the early fifth century, the renewal of occupation at Mucking can perhaps once again be brought forward to the first few decades of the fifth century, if not the last decades of the fourth century. This earlier dating for the Anglo-Saxon settlement may, additionally, give a better context for the very Late Roman pottery wares found largely in features of seemingly Early Anglo-Saxon date. These

Romano-British pottery assemblages are largely in *Grubenhäuser* fills or ditch fills with high proportions of Anglo-Saxon sand-tempered pottery (thought to indicate the earliest Anglo-Saxon features at Mucking). It may be that we are starting to finally identify a 'primary' Anglo-Saxon material assemblage: employing burnished and particularly carinated handmade pottery alongside later Romano-British wheelthrown wares of particular types. Much Hadham wares, Portchester D wares and Oxfordshire Red Colour Coats all form part of this assemblage.

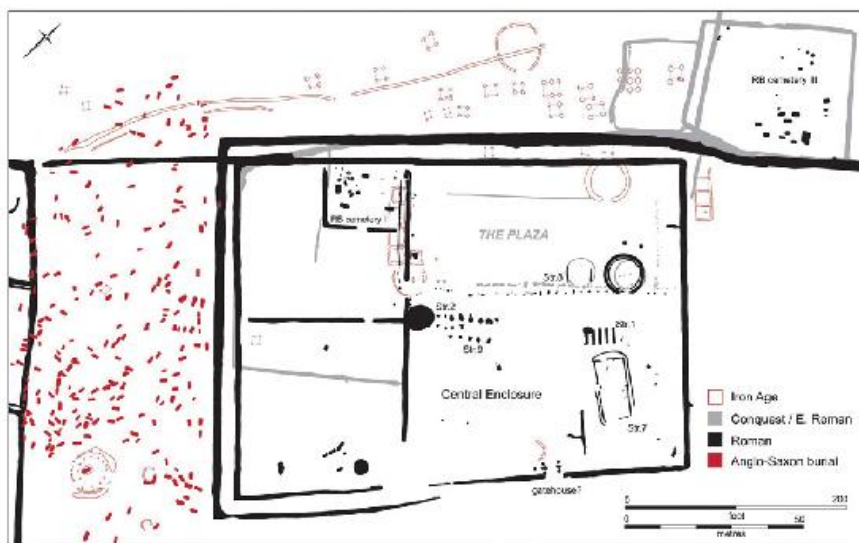


Figure 5.20. Mucking's long-term 'hub', showing interrelationship of the Late Iron Age Plaza to the Roman Central Enclosure's 'empty ground' and Anglo-Saxon Cemetery II.

This redating potentially has major significance. It makes more sense of the stone coffin burial that had been inserted into the earlier RB Cemetery IV, which is dated to the late fourth century by its glass vessel. With 'Anglo-Saxon' burials such as Graves 631 and

875, with their bracelet and/or finger-ring assemblages, which would not look out of place in a later Roman cemetery, and potentially a few of the inhumation burials in RB Cemetery I also dating to the fourth century, there might have been a continuation of burial activity, at least in a limited and intermittent form.

Medlycott and Atkinson in their recent review of Roman settlement in Essex note that just over a third of the county's fourth-century settlements have also yielded limited quantities of fifth to seventh century pottery (2013, 86). To the best of our knowledge, though, Mucking differs from these and other such sites in that it is the only instance where it can be demonstrated that its earliest Anglo-Saxon inhabitants were actually *using* Late Roman pottery (vs. its curation/collection). This, of course, then returns us to issues of acculturation. It also forefronts the question of the nature of Mucking's occupation, and how its inhabitants had access to contemporary Roman wares and metalwork. This issue largely turns on the precise dating for the start of this occupation. If of early fifth-century date, then it would have been a matter of a community trading with 'lingering' Roman settlements. As demonstrated by, for example, the site's Mayen and *céramique à l'éponge* pottery, this would have to mean that they still had access to cross-channel imports. Chronologically this would not pose a major problem as, on the Continent, both wares continued in production until the mid fifth century (see [Fig. 5.18](#); Tyers 1996; Fulford & Bird 1975; Fulford 1977). Yet, at the Stanford Wharf Site nearby, the same range of very Late Roman wares occurs

without any Anglo-Saxon presence and are there dated to the later fourth century (Biddulph *et al.* 2012, 159). The alternative scenario would then be to accept the fourth-century chronology of such Late Roman pottery in Britain and see the origins of Anglo-Saxon-style settlement and burial at Mucking as dating to the later part of that century. This casts an intriguing light on the transition, with radical implications for understandings of this period.

Weighing the evidence, the latter would seem the most likely and implies the existence of a terminal Roman settlement phase (Phase 4) that essentially involved an ‘Anglo-Saxon’ community. Based variously on the criteria presented both here and in [Chapter Three](#)’s case-study, [Figure 5.19](#) attempts to map the possible extent of that settlement cluster. In its definition, some *Grubenhäuser* with substantive quantities of Roman material – such as GH12/21 with more than 200 sherds (see [Table 3.24](#)) – are excluded on the grounds that they cut through major earlier Roman-phase features and there is, therefore, a greater chance of their finds being residual. Nor does that illustration necessarily imply that all of the so-delineated *Grubenhäuser* related to this phase. Obviously, there was phasing of these structures, with some likely to have been later and, furthermore, some have relatively low Roman finds quantities. What is essentially shown is a main settlement area, extending over some 0.85ha, running alongside the Roman road/trackway, RT2, and the northwestern side of the RBII enclosure. In its basics, this former Roman roadside arrangement bears comparison to that of the Anglo-

Saxon settlement at Bloodmoor Hill, Carlton Colville, Suffolk (Lucy *et al.* 2009). There appears to have been a southeastern extension off of Mucking's predominant alignment that encompassed those *Grubenhäuser* beside the 'Antler Ditch'.⁵ As also shown on [Figure 5.19](#), there would seem to be four core zones, with the latter extension area being one (No. 1), involving GHs 38, 57 and 58 with high counts of Roman pottery. Within the main settlement swathe are two other cores: one including GHs 1–3 in the south (No. 2) and another, further north, with GHs 30, 43, 50 and 55 (No. 3). Located some 50m north of the main settlement swathe (and c. 25m south of AS Cem. II), there would seem to have been a 'removed' or detached cluster/core (No. 4), including GH79, plus GHs 77 and 78. These four core areas ranged in size from 265sqm to just over 0.1ha. Not all, of course, were necessarily directly contemporary and the nuancing of this settlement-phase – plus the detailing of its relationships with the site's cemeteries – is something that we will have to leave to future researchers.

All this duly evokes the Joneses' and Evison's initial *feoderati*-related explanations for Mucking's original Anglo-Saxon settlement. It is equally beyond our remit to attempt to resolve this, except to note that as more quasi-historical 'dynamic' interpretations – being able to entertain a degree of cross-channel population movement and emphasising long-distance connections (*vs. de facto* insular continuities) – are once more coming back into favour in British archaeology, these no longer seem quite so outrageous as they did 20–30 years ago.

Before concluding this section two other points should be raised, both of which are discussed at greater length within the Prehistory Volume's final chapter. The first has to do with the scale and spread of the area's Anglo-Saxon occupation. Not only was it present in both the 1978 North Ring Site, but also, to the south, in the earlier Linford Quarry investigations (Late Bronze/Early Iron Age being the only other 'period-horizon' to extend across the three siteareas; see Prehistory Vol., fig. 6.15). In that volume the sequences of eight neighbouring excavations are compared; in their period-count 'tallies', ranking second after the Late Bronze/Early Iron Age (present on six of these), was the Early Anglo-Saxon, with its remains found at five of the environs sites: both at Orsett 'Cock' and its causewayed enclosure, plus Gun Hill, Stifford Clays and Ardale School (Prehistory Vol., table 6.3). This is a truly remarkable recovery rate, especially as none of those excavations were directed towards that period. With the exception of the Yorkshire Wolds/Vale of Pickering (Powlesland 2009), it would be hard to find an area of the country with such a density of Anglo-Saxon settlement, and certainly Kent's recent huge-scale projects have not revealed comparable levels.

The other point relates to something that has always seemed essentially inexplicable. It concerns the way in which Anglo-Saxon Cemetery II filled the marked gap between the Southern Enclosures and the Central Enclosure (Fig. 5.20). Only a small amount of Late Roman and Anglo-Saxon pottery occurred within the latter and (as opposed to the Iron Age North Enclosure) it does not seem to have survived as a

substantial earthwork. This may also relate to the scale of the Central Enclosure's mass-clearance – as marked, for example, by Well 4's infilling – and its effective 'non-use' thereafter. Presumably, though, the north side of that cemetery must have occurred in relationship to some kind of demarcation and, perhaps, the Central Enclosure's embankments still stood. Whatever the case, it is almost as if the Early Roman *Plaza*-related 'reserved ground' was then extended to the Central Enclosure as a whole, with the Anglo-Saxon cemetery's location reflecting its lingering respect. Though that cemetery might have had Late Roman origins, there can nevertheless be no doubt that long-term 'resonance' played a major role in the distinction of the later Iron Age/Roman settlements' central 'hub'.

Marking the end of Mucking's publication series, the Prehistory Volume concludes on a somewhat elegiac tone, that is hopefully appropriate to the long labours of so many. To some extent, though, that amounts to a device and it was this chapter that was actually the last to be written, as completing the site's prehistory demanding considerable rewriting of its Roman. In reference to themes explored in the companion volume, this is not a matter of 'past-writing' as palimpsest: not a complete over-writing, but revision and nuancing.

Coming to the end of this volume and what, for the foreseeable future, is the last of this great site's postexcavation, some final thoughts concerning the processes involved are warranted. These primarily concern 'timeslicing' and the idea of 'total archaeology'. The

Prehistory Volume quoted Champion's 1978 critique of Mucking and the period's other 'total excavations', particularly citing its lack of ploughsoil investigation and sieving (1978; see also Evans et al. 2006 on Great Wilbraham's processualbased 'total' agenda). As a goal, wanting more of the data and being ambitious in the application of techniques is, of course, only laudable. But the past will invariably be partial: a site's parts will almost always extend beyond the immediate edges of excavation and, otherwise, interconnect with other settlements. That is certainly the case with Mucking, whose connections – as well as interpretative resonance – are so far-flung. Indeed, achieving so much more than most excavations in its many vast data-sets, it instead opens up so many more questions and possibilities, rather than providing a greater range of hard answers.

As to time-slicing, this relates to how sequences are divided and the understanding of a site progresses. As touched upon in the first chapter here, for Mucking this has involved a significant degree of circularity. This is exaggerated in its case because of what has been, in effect, its 'archaeology backwards' publication programme. This was essentially determined by the nature of 'archaeological types': what can readily be distinguished, taken out and worked on from its vast accumulative 'mass'. Anglo-Saxon Grubenhäuser and burials are fairly easy to delineate and, hence, following the assembly of the Atlas mapping (Clark 1993) came the Anglo-Saxon settlement (Hamerow 1993) and then its graves (Clark & Hirst 2009). While, in theory, we advanced the *Prehistory* and *Roman* Volumes simultaneously, in practice work proceeded at a much faster pace on the Roman; this is largely because its

features and phasing were seemingly more self-apparent. Yet, finally completing the *Prehistory Volume* – especially the realisation of the site's Late Iron Age layout – demanded a major rewriting of this book. So too, though, did problematising the site's Late Roman usage call for a significant revision of how its Anglo-Saxon occupation was initiated. Therefore, at least in relationship to the site's series of publications, in the end we have effectively gone back to its beginning ...

Given technological advances in computing over the last 10–15 years, things need not have been this way. A dedicated team with really considerable funding could have worked on the site's post-excavation for, say, upwards of a decade, with the end result being four or five 'seamless' volumes. There would, of course, be major staff-/data-handling challenges and, given the nature of the site's records, it certainly would not benefit the mental well-being of those involved. Yet, even all this would not necessarily ensure a 'straight path' and spiralling towards knowledge – demanding a degree of back-tracking – is arguably intrinsic to the discipline's hermeneutic (Evans & Hodder 2006). Conducting one series of analyses allows you to realise others. Equally, at long last coming to terms with what was really happening in one phase (i.e. finally thinking you have cracked its structure or 'code') makes you recast what went before/after and reconsider their 'temporal edges' – phasing boundaries – and how time/volumes are split up. Accordingly, there is no escaping that there is an abiding circularity in the writing-up process. We can try to regiment and manage its ways, making the divisions between periods and their data-sets seem 'natural'. Yet, these things are not self-defining givens and the routes

towards knowledge are rarely straightforward. When it comes to landscapes and/or major long-term settlement sites, it must be a matter of repeatedly thinking and analysing forward/back in time and up/down sequences.

Notes

1 Known as ‘Belgic’ since 1890, this is a chronological and stylistic term indicating a certain type of pre-Conquest pottery, rather than any kind of ethnic or cultural descriptor (Thompson 1982, 1).

2 http://www.twmuseums.org.uk/archaeology/Ceramic%20Database/BB2_SENK-type_series.pdf

3 Employing the criteria of the University of Reading/ Cotswold Archaeology’s Roman Rural Settlement Project, Mucking would have affinities with their ‘linear/developed farm’ category, but again it seems to include ‘more’.

4 We have duly considered the possibility of some of Mucking’s *Grubenhäuser* actually being of earlier, strictly Roman attribution; however, all apparently had Anglo-Saxon pottery within them.

5 As mentioned, this would also coincide with the area of Romano-British Wells 1–3. While no Anglo-Saxon pottery was apparently reported from them, further to the south, Wells 7 and 8 had such material in their upper profiles and this possibly raises issues concerning their functional longevity. That said, with only very little distinctly Late Roman pottery recovered from the Well 7 complex, and with none apparently from Well 8 (see Figs. 3.35 & 3.44), this could equally relate to surface middens subsequently caught in their earthwork profiles.

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Appendices

Appendix 1. Pottery imports from southeast England to Hadrian's Wall: type series equivalences and date ranges. Together with the Monaghan 1987 types and dating, here are listed the Arbeia type codes and context dates, with the addition of the incidence of this group at other sites on Hadrian's Wall listed by Bidwell in 1994, Monaghan types and dating, Going type and dating and MPX type code and dating.

source: [arabia-2000](#)

Type and Wear museum type series codes (Bidwell n.d.)	Description	Date of contexts	Nature of context and other comments (1994, 228-31)	Monaghan type (1987)	Monaghan date	Going type (1987)	Going date	MPX type	MPX date	Other instances
1	narrow-necked jar							GC		
1.1	narrow-necked jar with neck cordon and decoration none	270+	South Shields well 5040; Wallsend cistern 1030-44 L5-E4, Turret 330-period 1B; and Crossed Bar & Bar 1974 fig 21 no 5	1B6 & 3A5	170/90-230 and 170/90-230/90	G-35	E-M4	GC.04	120/90-200/250+	Monaghan 1987, 212; Housesteads example in L2-E5 context (1B) and at Corbridge (type 3A5), and Camelon, Antonine fort, Monaghan 1987, 213 type 3A
1.2	narrow-necked jar with hollow cordon	225-L3/E4	South Shields 2235b							
1.3	narrow-necked jar with cordon and rouletting	225-L3/E4	South Shields 2415b; Also example with diamond rouletting from Wallsend (Bidwell 1994, 229)	1B6 & 3A5	170/90-230 and 170/90-230/90	G-35	E-M4	GC./GC.04	120/90-200/250+	Bidwell calls this type a Mocking type N (1994, 229)
1.4	narrow-necked jar with narrow flanged neck	undated	Wallsend	1A1	180/200-270/300					
2.1	narrow-necked storage jar	after 270	Wallsend includes example with diamond rouletting			G-M/30	L2-3/4	GC.02	120/90-220/250+	
2.3	N Kent shell-tempered storage jars with short everted rim and wheel ear impression on shoulder	225+	South Shields	3D	40/90-230	G-447	M1-3	J004	40/90-230	
3.1	narrow-mouthed storage jar with upright everted rim	230+ and L2-225/35+	Wallsend					GC.09	120/90-250+	

Type and Wear museum type series codes (Biswell n.aff)	Description	Date of contexts	Nature of context and other comments (1994, 226-30)	Monaghan type (1987)	Monaghan date	Giving type (1987)	Giving date	MPX type	MPX date	Other instances
3.1 and 2	thickened-rim storage jar with abnormal shaped rim (3.1) and without shoulder (3.2)	ureirat and L2/E3, 225/35 and 240+	Wallband	3.2a-3.04.1	90-150	G42	L3-4?	JR05?	70-200/230s	
4.1	poppy head beaker	225+, Traj-Had	South Shields	2A11-5	70/90-150/60-90	H6	L1-2	NM06 but not made at Mucking	100-160	Poppyhead beaker, Monaghan type 1E1; Flagon and 2G carinated beaker shown at Murrills; poppyhead also at Traiprain Lane (Monaghan 1987, 215)
4.2	large poppy head beaker with rouletting	M4	South Shields	2A6	190-220/30			No evidence that this jar was made at Mucking		
4.3	indented beaker	ureirat	South Shields	2D	100-220/30	H34	L2-M3	NR	180/190-250	Catleary (Monaghan 1987, 213; Coonrod (Rae & Rae 1974, fig. 21 nos. 19-20)
4.4	globular beaker with everted rim	4	Wallband	2I	80/90-130/40 to 150-190/230					
4.5	plain or bead rim beaker rouletted	mid Antonine	Wallband	7 East Anglian						
5	RR2 cooking pot not examined here			3J						

Type and Wear museum type series codes (Bibwell n.d)	Description	Dt of context	Nature of context and other comments (1994, 226-31)	Monaghan type (1987)	Monaghan date	Going type (1987)	Going date	MPX type	MPX date	Other instances
6 excluding 6.10-11	necked jar	225-L3/E4, 270+, 223-225, M4, L2/E3- 225/35	Waltham and South Shields	3H	180-500	G24-5	2-4	FA except FA04	120/30- 250	Cramond (Holmes 2003), no. 170) bitul rim version identified as Mucking type found with L2-E3 pot from drain 706 in the industrial area dated to Severan period but in an area where backfills included residual Antonine pottery, Carpiac (Hartley 1982-3, fig. 8 no. 7), Cramond (Rae & Rae 1974, fig. 21 no. 13) Corbridge (Bishop & Dore 1980 fig. 127, no. 336-7) In group dated after AD 240, Vindolanda (Bibwell 1985, fig. 70 no. 120) in context dated mid 3rd, 1100s/cent identified by Monaghan 1987, 213 type 3944 and 3936
7	lid-seated jar type 131	225/35- L3/E4, c225, 3	Waltham and South Shields	3L	50-250	G5	2-3d	AB06	50/60- 100/110 (BL) 100- 250/250 (CR)	
8	heavy bead rim jars	225-L3/E4	South Shields	3P2	40-150/70	G2/3	M- L17	AB05	50/60- 100/110	
9	plate/ slightly beaded rim jars in BR2 and GW	225/35- L3/E4, 4	Waltham	3E5	120/30- 170/90	not present		AB04	50/60- 100/110 (BL) 120- 160 (CR)	

[illegible]